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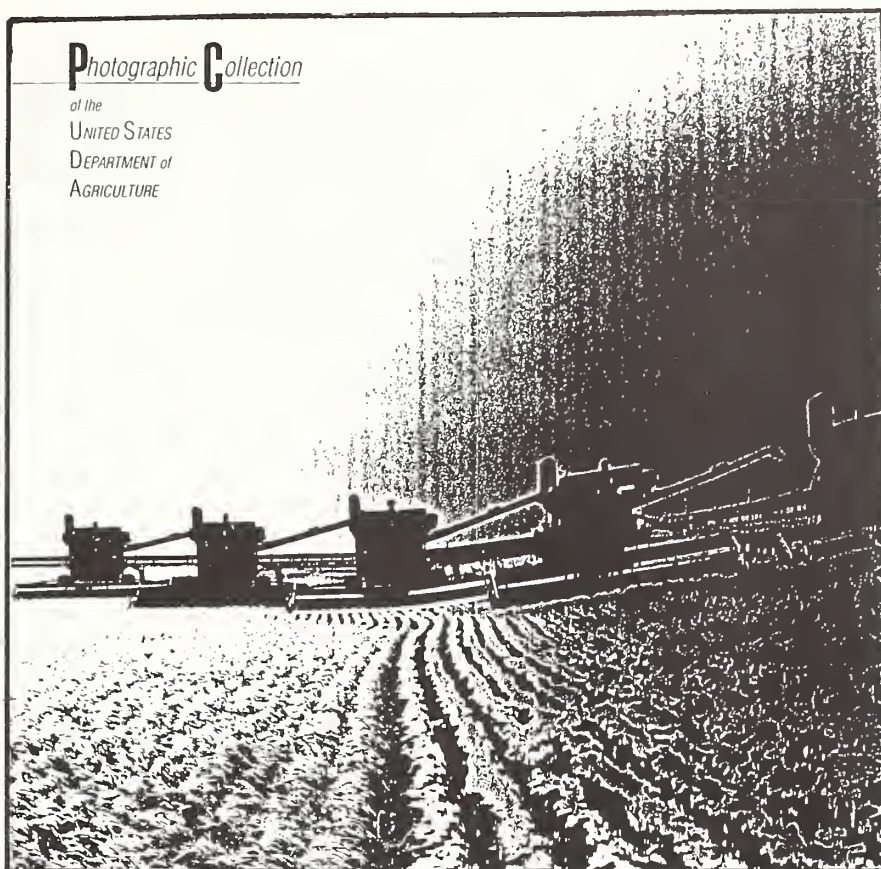
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Photographic **C**ollection

of the
UNITED STATES
DEPARTMENT of
AGRICULTURE



Cover of the new laser disc, **Photographic Collection of the United States Department of Agriculture**, jointly produced by the National Agricultural Library and USDA's Office of Public Affairs.

Laser Disc Technology Allows Quick Access to USDA Photos

by **Brian Norris**
Public Affairs Officer, NAL

Imagine storing a warehouse full of photographs in a space barely big enough for a phonograph record. Now imagine being able to retrieve photographs from that collection in seconds. The National Agricultural Library, working closely with the Office of Public Affairs of the U.S. Department of Agriculture, has put together a system to do just this.

NAL employees Alan Fusonie and Ronald Young, together with Bill

Also in this issue...

4 Papers on Optical Disc from NARA, NAL, & Smithsonian, pp. 4-12
NAL News in several articles, pp. 13-16
News from NAL's Information Centers, pp. 16-20
Staff Update, Awards, New Employees, pp. 20-28
NAL 1990 Highlights, pp. 29-34
EEO Programs, pp. 34-35
National & International Visitors, pp. 36-41
New Bibliographies, pp. 42-44
New Serials, pp. 44-45
Publications Exchange, pp. 46-47
Agriculture Datebook, p. 47

...and more

Hauser, who recently retired from NAL, have developed two laser discs that contain 50,000 current and historic agricultural images. One disc includes historic photographs from the files of the U.S. Forest Service. The other disc has nearly 16,000 images from the current photography files of USDA.

Development of the USDA disc was spurred on by the USDA's Photography Division. "For years, we have been looking for ways to protect our photographs from excessive wear while at the same time improving access to them," said Theodosia Thomas, chief of the division. "When I read about laser discs, I thought they might be the answer."

The discs are about the size of long-playing phonograph records and contain black-and-white photographs, color slides, botanical illustrations, and television public service advertisements. Using a computer database developed by NAL staff with software from C-Quest, individual images can be located in seconds and displayed on a monitor.

"This technology allows access to this huge, beautiful collection of agricultural photographs," said Thomas. "In the past, many photographs weren't used because a person could become tired of thumbing through photo files. Now, with the disc system, a person can type in a few key words, let's say 'plow horse,' and in seconds see every plow horse picture we have and get information on ordering copies."

Fusonie, head of the NAL Special Collections Unit, said the system works to protect photographs by eliminating the need to touch them when perusing the files. "Some of these photographs date back more than 100 years," he said. "They are delicate, yet they have tremendous historical value and should continue to be used in illustrating articles and books. The laser discs cut down on their handling, extending their useful lives."

Thomas thinks the discs will create awareness that the photographs are available. "Because access to the photos has been improved, we expect them to be used more often and seen by more people. This will increase demand for them. It's a snowball effect, which we welcome," she said.

Young said that with the right equipment, copies of the photographs can be printed from the discs and the quality of the print would be good enough to use in many publications. "A person could also download images from the disc using 35mm instant film," he said. "Imagine how these capabilities could be used by editors. Thousands of photographs literally at their fingertips."

Presently, NAL and the USDA Photography Division are working to refine the filing of videotapes and motion picture film on laser discs. The two discs include television public service advertisements in addition to photographs. The ads can be played from the discs or copied onto videotape.

Young said that an important component of the system is the computer software that was developed by a Boston company. The software contains a synonym-based thesaurus which allows the system to make "logical decisions" when searching for photographs. "If you want to see what pictures of streams we have in our files, for example, you enter the term 'stream,'" he said. "The software will search for photographs under the terms 'stream,' 'brook,' 'creek' and probably others."

The disc system, consisting of the either the Forest Service or the USDA photo discs and the database is being sold by the Federal Computer Product Center of the National

PHOTOGRAPHIC COLLECTION OF THE U.S. DEPARTMENT OF AGRICULTURE

Volume 1, September 1989

INTRODUCTION

The U.S. Department of Agriculture's Office of Public Affairs (formerly the Office of Governmental and Public Affairs), through its Office of Information, distributes information on agriculture and USDA programs and services to the media and the public. Photographs—both color slides and black and white prints—are an integral part of this public information and education effort.

In January 1987, the Office of Governmental and Public Affairs and the USDA's National Agricultural Library began a 2-year pilot project to record the Department's photographs on an optical disc and to develop a computerized database. The project was aimed chiefly at improving access to USDA's current and historical photographic images.

THE COLLECTION

The 12-inch laser disc, completed in September 1989, contains approximately 15,000 photographs illustrating broad areas of agriculture, food and nutrition, insects, plant and livestock diseases, forestry, and resource conservation.

It also contains two short videos and several public service announcements produced by USDA plus other illustrations from rare books and paintings from special collections at NAL.

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TABLE OF CONTENTS

	Frame number
Introduction.....	00004
Basic Equipment and Operating Instructions.....	00009
Advanced Equipment and Operating Instructions.....	00010
Ordering Instructions.....	00012
Subject Index.....	00020
USDA Photographic Collection.....	08400
NAL Special Collections:	
Passmore Flower Watercolors.....	09000
Pomology Paintings.....	09372
Ehret: Plantae et Papiliones Rariores.....	10343
Foreign Seed and Plant Introduction Service.....	17355
Plant Explorers: Jim Duke.....	17412
Small Farms: Bud Kerr.....	20947
U.S. Postal Service Operations.....	21405
Videos:	
The People's Department.....	24001
Join The Earth Team.....	45200
Public Service Announcements:	
Match, Smokey Bear Message.....	50600
Feelings, Smokey Bear Message.....	51500
National Treasures.....	54000

Technical Information Service (NTIS) for about \$500.00. The discs sell for \$95.00 each. The address of NTIS is 5285 Port Royal Road, Springfield, Virginia 22161, telephone (703) 487-4650. The equipment needed to use the system costs about \$2,500. The search software containing the synonym-based thesaurus is available commercially.

BASIC EQUIPMENT AND OPERATING INSTRUCTIONS

Basic Equipment: 1. Laser disc player
2. Color TV/Video monitor

You can view photographs and motion sequences if your laser disc player is capable of finding an individual frame by number. The frame numbers can be found by consulting the *Table of Contents* and the *Subject Index*. Enter the selected frame number on your laser disc player control pad and push the "search" button. To see the following frames in succession, push the "still/step" button.

ADVANCED EQUIPMENT, SOFTWARE, AND OPERATING INSTRUCTIONS

Advanced Equipment: 1. Laser disc player with RS-232C interface
2. Color video monitor
3. Micro computer: MS-DOS computer, hard disk with a minimum of 20 megabytes of free space, telecommunications card, and monitor
4. RS-232 cable and null modem
5. C-Quest™ software
6. Database files for this USDA laser disc

You can "browse" through the photographic collection using the database software to search by subject, geographical area, date, and other search criteria. The software finds a "picture record" matching the search criteria, displays the record on the computer monitor, and then shows the matching photograph on the video monitor.

The "picture record" database for the laser disc is available on diskettes in MS-DOS format, operating with the C-Quest™ software. It requires about 20 megabytes of free hard disk space for storage—14 megabytes for the picture records, 5 megabytes for the USDA/NAL C-Quest™ dictionary, and 1 megabyte for the C-Quest™ software. Consult manual for loading the "picture record" database.

The motion sequences can be accessed with the database searching the "Name" field. Type in the name of the video or the public service announcement, then press "play" on the laser disc player.

CONTRIBUTING USDA AGENCIES

Agricultural Marketing Service (AMS), Agricultural Research Service (ARS), Cooperative State Research Service (CSRS), Food Safety and Inspection Service (FSIS), Forest Service (FS), Human Nutrition Information Service (HNIS), National Agricultural Library (NAL), National Finance Center (NFC), Office of Public Affairs (OPA) and Soil Conservation Service (SCS)

ORDERING INFORMATION:

DISC AND DATABASE

To obtain ordering information, call or write the Photography Division, Office of Public Affairs, Room 4404-S, U.S. Department of Agriculture, 14th Street and Independence Avenue, SW, Washington, DC 20250-1300. Telephone: 202-447-6633.

SOFTWARE

The C-Quest™ software is available from Image Concepts, Inc., 33 Boston Post Road West, Marlboro, MA 01752. Telephone: 508-481-6882.

PRINTS AND SLIDES

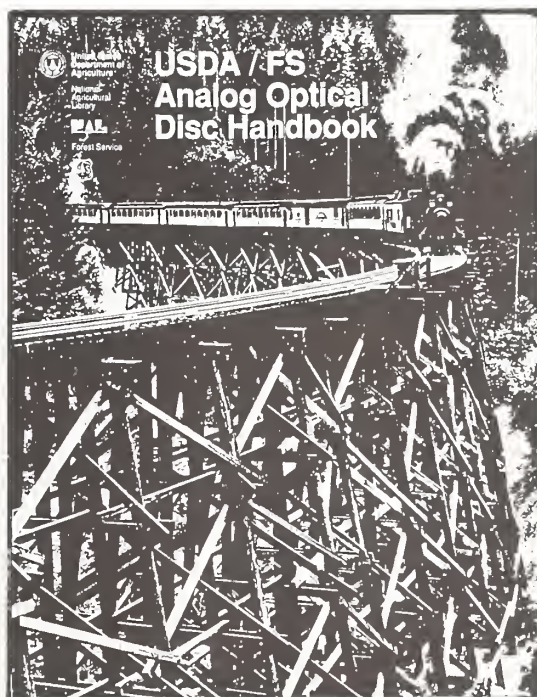
Reproduction prints and duplicate color slides are available to the news media free of charge and to the public for a nominal fee covering the cost of reproduction. They may be ordered by title number and the laser disc frame number from the Photography Division.

VIDEO

The video, "The People's Department" can be purchased for \$21.90 from the Dub Center, 51 New Plant Court, Owing Mills, MD 21117. Telephone: 800-382-0080.

CREDITS

This project was produced jointly by Special Collections, National Agricultural Library, and the Photography Division, Office of Public Affairs, U.S. Department of Agriculture, in cooperation with the Non-Print Media Center of the University of Maryland and the School of Library and Information Science of Catholic University.



Cover of the USDA/FS Analog Optical Disc Handbook, which was designed to be used with the first NAL laser disc containing NAL's Forest Service Photographs Collection.

The boxes on the preceding and this page provide information from the jacket of the laser video disc.

The following four papers were presented at the 83rd Annual Meeting of the Organization of American Historians and the 11th Annual Meeting of the Society for History in the Federal Government held in 1990 at the Washington Hilton and Towers, Washington, D.C.

Bringing Images to the Scholar: Laser Disc Systems

Introductory Remarks

by Richard F. Myers
National Archives and Records Administration

Imaging.... Imagination.... There is a great deal of imagination in today's imaging technology.

If I were to visit working historians and teachers of history in their work places, their offices, or their classrooms, and tell them that I had an economical, workable system that would permit them to review in the comfortable, familiar environment of their offices for research purposes or to present in their classrooms for instructional purposes the vast holdings of the major research libraries, archives, museums, and manuscript depositories, quite likely, they would say: "Imagine that!"

But today, there is no need to imagine such possibilities, for the ability to do exactly that exists. Such capabilities are easily within the financial and technical capacity of most academic institutions and most historians. Today, optical laser disc systems can provide historians with high quality images from research collections throughout the country and the world at a reasonable cost.

These systems are not only affordable. They also can save the scholar and the educator significant sums by eliminating the need to travel to the depositories which have custody of the original imagery or the need to expend large sums on copying the original images onto another medium for use in research or instruction.

These analog systems are easy to use, and when joined with searchable databases supported by personal computing hardware, they offer tremendous potential for rapidly accessing tens of thousands of images. Furthermore, these systems are actually available, they are not in a developmental or prototype environment. They are at hand now and accessible.

Each of the papers which follow describes the laser disc system developed

by their authors. These systems are in use at the institutions with which the authors are associated: the National Agricultural Library, the Smithsonian Institution, and the National Gallery of Art. The analog discs prepared by these institutions are available for purchase and use by scholars and educators.

More than 150 years ago Louis Daguerre announced to the world: "I have seized the light and arrested its flight." With that announcement began the technology we know as photographic imaging. Imaging technology has grown and advanced due to a healthy dose of imagination. These presentations will surely stimulate the reader's imagination and provide a glimpse of the exciting possibilities that laser discs afford the researching historian or the historian teaching in the classroom.

The Laser Disc in the 1990's: Improving Image Preservation and End User Image Access

by Alan Fusonie
Head, Special Collections, NAL

Introduction

In 1961, C. P. Snow, British novelist, scientist, and government administrator, in an April 2nd article in the *New Times Magazine* said that, "the world's greatest need is an appetite for the future...." Today, as we venture into the 1990's, the world's appetite for the future may be more profound than



photo: J. Swab

Ronald Young, Audio/Visual Information Specialist, Special Collections, NAL, photographs material for the laser disc. With his left hand he adjusts a photograph being recorded on the disc by the camera mounted above his hand. In his right hand he holds the remote control which sends commands to the monitors and the disc mastering equipment, part of which can be seen on the right side of the table.

just the emergence of political and economic freedoms, but also may include the stepped-up democratization of human knowledge. And here, the application of exciting and appropriate technologies could make the difference. An ability to communicate with all levels of society throughout the world in a meaningful and visual way is expanding with each passing day. In particular, the increased use of laser disc technologies and satellite image transfer augers well for the future of Marshall McLuhan's "global village." An expanded "global" image network will break down the communication barriers of language and illiteracy. The power of connectiveness through shared common image technology will provide all nations with ever expanding areas of visual understanding.

As we ponder the world's agenda for the 21st century, we must see that there is a challenging journey ahead in the dissemination and use of laser disc technology. Just think for a moment about the poor farmer in a developing country, his rural environment, and his interpretation of the word "disk." His visual description would most likely focus on a plow made up of circular plates used to prepare the soil for seeding. Very few individuals in the rural countryside of developing nations are even remotely aware of the disc technology for storage and access of text and non-print images. Even so, many of these rural towns in the developing countries have government owned television with public viewing screens in their community. Under enlightened leaders, the growing volume of available images on television videodisc could be cost-effectively displayed on the T.V. screens for instructional purposes — a real visual knowledge for the people. The potential for active involvement in the global community is improving with each passing year.

Within the United States, the United Kingdom, and Western Europe, there exist museums, archives, and libraries hoping increasingly to utilize laser disc technology. In the Washington, D.C., metropolitan area, the three na-

tional libraries — the Library of Congress (LC), the National Library of Medicine (NLM), and the National Agricultural Library (NAL), as well as the Smithsonian Institution and the National Archives and Records Administration (NARA), have been extensively involved in research and development in the area of optical laser discs. At one time, these institutions relied largely on the traditional physical hands-on with gloves approach to locating non-print images in response to user requests. This manual intervention and search process may have contributed not only to the deterioration and weakening of individual documents but also to the eventual need for costly conservation/restoration treatment.

Revolution in Non-Print Image Management

Fortunately, we are approaching a take-off point in the expanded application of optical laser disc technology. The non-print image management revolution during the 1990's will significantly change the way archivists, curators, librarians, and others will store, preserve, retrieve, display, and access non-print images of photos, slides, art, video tapes, motion picture film, and text, as well as rare and unique materials. NAL is involved not only in improving non-print imaging through use of the optical disc, but also in evaluating the capture of full text and graphics in digital format for publication on CD-ROM laser discs. NAL is also concerned with the electronic transmission of high-resolution, full-text images, since merging technologies to benefit the users is the ultimate goal.

The Library of Congress is involved in an ambitious multimedia program called "The American Memory" — a catchy title easily understood by the American taxpayer at the urban and rural grass roots levels. Outstanding collections are being examined and a variety of manuscripts, books, movies, pictures, and sound recordings are being selected and fully indexed, cataloged, and stored on both digital compact disc and analog laser videodisc for eventual distribution to universities, as well as public secondary and school libraries around the country. One of the first program themes is entitled "America at the Start of a New Century: 1880-1920" and will include the following: 25,000 photographs from the Detroit Publishing Company; writings by African-American authors from the Daniel A. P. Murray pamphlet collection, 1820-1920; selections from the papers of Edward and Marian McDowell 1869-1908; life histories from the Folklore Project, WPA Federal Writers' Project, early films from the Paper Print Collection, 1960-1915, and other selected clusters such as Folk Music from Northern California. The types of material, quantities, and funding support will influence decisions on the appropriate optical disc application.

Recently, Carl Fleischhauer of the Library of Congress Planning Office and

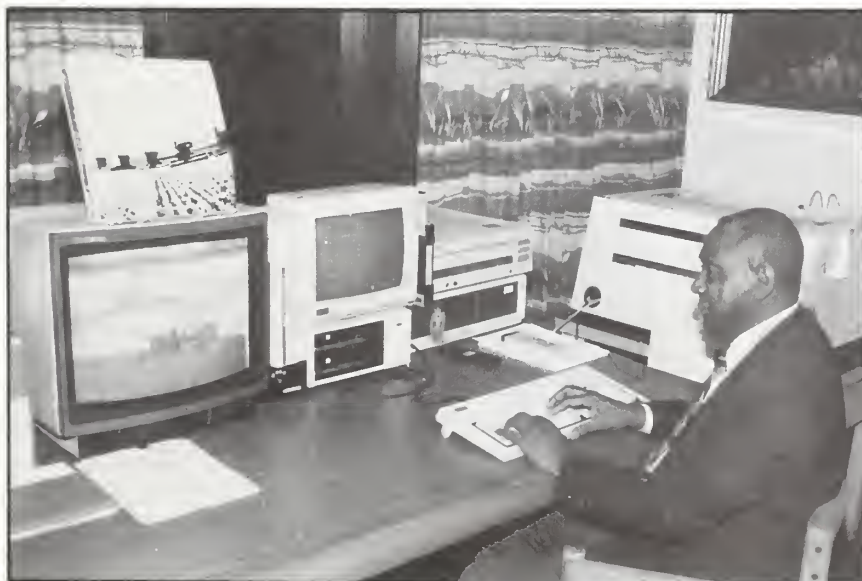


photo: J. Swab

Concurrently with mastering the photographs on disc, or any time subsequently, the database is updated. Here Ron Young calls up an image from the disc on one monitor, and on the adjacent computer monitor views an input screen used for entering the data describing the photograph: i.e., subject, place, date, photographer, etc.

co-editor of the recent book, *Documenting America 1935-1943* (1988), was reported in the March 1990 issue of *Online* as indicating that analog video with high capacity for still picture storage may still be an inexpensive approach to distributing images to large photo collections. Although analog video has a lower resolution than the digitized images, it is quite satisfactory for the preservation of photographic images, and a single side of a 12-inch analog videodisc can hold over 50,000 images. Private sector assistance for the early planning stages of the project comes from the Annenberg Fund, Inc., and Armand Hammer's Occidental Petroleum Corp. Equipment manufacturers' support comes from such companies as Apple Computer, Inc., Pioneer Video, and Pioneer Electronics. A three-year grant for collection preparation came from the David and Lucille Packard Foundation. Other federal examples of optical laser disc efforts to improve photo access are taking place at the United States Information Agency, the Departments of Navy and Defense and, also, in the private sector within such organizations as Caterpillar Corporation and the American Chemical Society.

Optical Laser Disc Non-Print Image Management at the National Agricultural Library

Since 1986, NAL has adopted the application of optical laser disc technology in producing a non-print image warehouse on two laser discs: *Special Collections: Forest Service Photographs* and *Photographic Collection of the United States Department of Agriculture*. The latter was produced in cooperation with USDA's Office of Public Affairs. Today, NAL has two 12-inch database driven laser disc finding aids providing access to over 50,000 images, including photos and color slides covering a broad area of agriculture, food, nutrition, insects, plant and livestock diseases, forestry, and resource conservation, as well as selected public service announcement videos and posters. Of historical/rare book interest is the image access to the botanical illustrations from *Plantae et Papiliones Rariores...* (1748-57) by Georg Dionysius Ehret (1708-1770) who was the dominant influence in botanical art during the middle of the eighteenth century. Also of importance is the selected image access to the original fruit art by Deborah Passmore, 19th century USDA artist, spanning such varieties as the Alexander Apple, Early Golden Apricot, Bartlett Cherry, Champion Gooseberry, Victor Loquat, and Armstrong Strawberry. The potential search and selection possibilities for the end user in agriculture and related fields is wide-ranging and expanding. The end user is able to search each disc with the accompanying database under many subjects, using a variety of strategies, and display the picture and accompanying information on adjacent video screens. For example, an author looking for pictures of women in farming, grain elevators in Kansas, fish farming or



photo: J. Swab
With Alan Fusonie, Head, Special Collections, looking over his shoulder, Ron Young demonstrates the use of the laser disk and database together, simultaneously calling up the video image and its record on adjacent monitors.

droughts in North Dakota, will easily find his or her search fast and visually rewarding. Entry points include not only subject but also photographer, date taken, geographic location, and many other search features oriented towards the end user.

USDA Photo Laser Disc Network

Over the past four years, there has developed a working laser disc network within USDA operated by visual information specialists who manage individual agency photo collections such as:

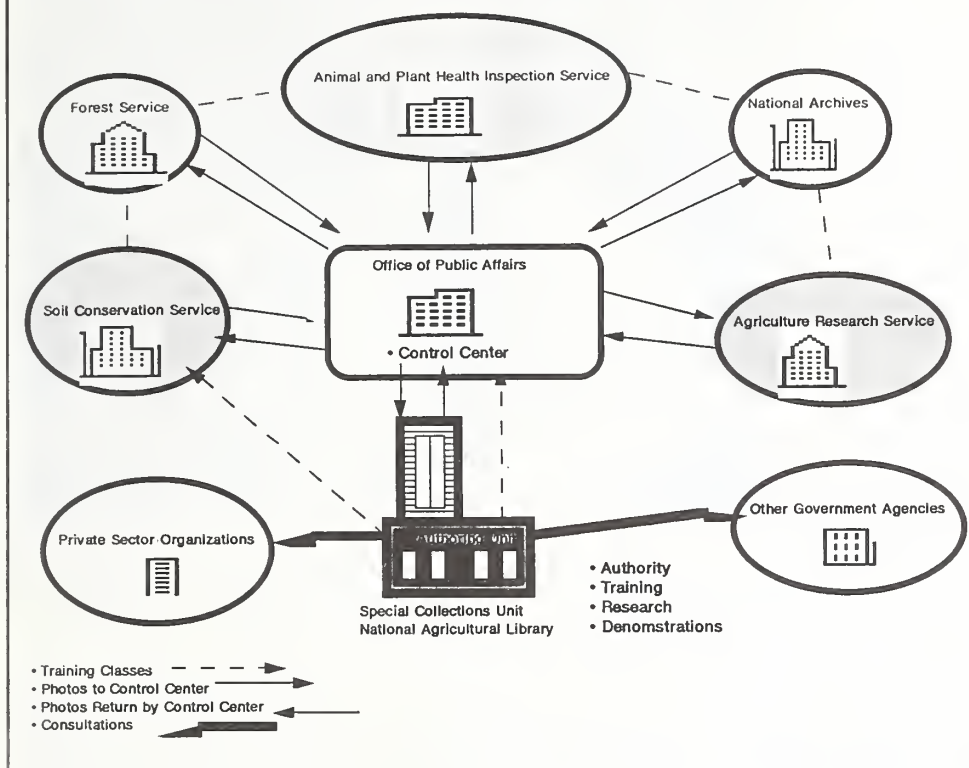
- APHIS — Animal and Plant Health Inspection Service
- ARS — Agricultural Research Service
- FS — Forest Service
- FSIS — Food Safety Inspection Service
- SCS — Soil Conservation Service
- OPA — Office of Governmental Affairs

From the initial selection process to documentation, data preparation to image and data entry, the practical sense of sharing, cooperation, review, and commitment to improving services to the end user through the application of laser disc technology has been outstanding throughout USDA. Crucial to the success of the program is the training and consultation offered by NAL's Special Collections authoring unit in the area of equipment and database reference searching. Special Collections has been a Beta test sight for evaluating and demonstrating the C'Quest equipment and software systems.

NAL's Special Collections Authoring Unit Worm Disc Production Process

The actual production work of recording still frames on an 8-inch Panasonic Worm Optical Laser Disc using a high-resolution Sony 3-CCD camera takes place in Special Col-

Flow Chart of the NAL/OPA Laser Disc Operation



laser disc finding aids to their current photos and slides as well as historical image files. At the college, high school, or grammar school level, many media librarians could substantially enhance the instructional outreach role within their institutions' educational curricula by selectively utilizing the rich visual materials increasingly available on laser disc.

Conclusion

Looking towards the future, I am reminded of the outlook of that great historian Arnold Toynbee who once said that the last men in the Western World who could hope to master the entire body of human knowledge available to them were the men of the 13th century such as Dante and St. Thomas Aquinas. Today, through the expanded application of new technologies, information leaders

lectures at NAL. Special Collections staff and students from the University of Maryland and Catholic University make up the authoring unit. During the imaging process, workers evaluate image quality by viewing on a 19-inch Sony Trinitron monitor. While poor images can be rejected, important images may be recorded and portions may even be enlarged with additional exposures. A big component of the search system is the computer software database developed by Image Concepts, Marlboro, Massachusetts 01752. This software is called the C'Quest Photo Database System. It contains an expandable synonym-based thesaurus which allows the system to conduct fast searches with multiple subjects, photographer, date, location, and other access points.

Benefits of Commercial Discs

Already the two 12-inch commercial discs not only have allowed more viewing access to a greater number of photos but also have stimulated greater interests in USDA photo collections among scientists, authors, editors, publishers, newspaper reporters, television producers, educational media specialists, and many others. Searches in the future will be done from offices, laboratories, and experiment stations in remote locations. Ideally, all Federal agencies should develop optical

hope to manage unbelievable quantities and varieties of information more effectively for the benefit of society. This is especially true in the optical laser disc field where both the government and private sectors envision expanded markets and exciting educational outreach opportunities. From the BBC Domesday Project, using interactive videodiscs for digital data and analog optical discs for capturing United Kingdom life in the 1980's, to the LC videodisc "The Ninety-



photo: J. Swab
Alan Fusonie presents the first copy of the new laser disc to Terry Sharrer (left), Curator, Division of Agriculture, Museum of American History, Smithsonian Institution.

Six: A Cattle Ranch in Northern Nevada," to the National Air & Space Museum Videodisc, to a home economics videodisc entitled "Individuals, Families, Societies," to optical disc storage projects for art objects, to the implications of laser disc technology on the medical profession, to the *Video Encyclopedia of the 20th Century*, we gain an appreciation for the sense of direction and growing commitment in the area of optical laser disc technology. Consumers are now purchasing laser disc video players with better picture and sound capabilities to view the expanding number of movies available in video laser disc. The 21st century is about 4,250 days away and counting down and the increased use of fiber optic cable networks will allow us to send pictures, text, data and even video images faster than ever before. Will we effectively face the technology challenges, changes, and opportunities that lie ahead? It is in the future that we will spend the rest of our lives and in that future will be the image communication networks made up of information providers and end users, on-line image and data outlets, image transfer and satellite units and the ongoing enhancement of the global village that McLuhan imagined 21 years ago.

National Gallery of Art Videodisc: Origins, Development, and Expectations

by Ruth R. Perlin

Head, Department of Education Resources:
Extension Programs and Art Information
National Gallery of Art, Washington, DC

I should like to begin with a brief description of the National Gallery of Art videodisc, for those among you who may not be familiar with it. Basically, we should start by noting that the disc is designed for use on optical laser videodisc players with interactive and random search capabilities.

The disc contains two video programs, of about twenty-five minutes in length, narrated by J. Carter Brown, Director of the National Gallery. The program on Side One provides a brief history of art museums in America, concentrating on the origins and development of the National Gallery, the growth of the Gallery's collections, and the development of the museum's facilities and activities. On Side Two, there is a second video program consisting of tours of the Gallery's West and East buildings, and providing an art historical summary of the collections.

Complementing this video program on Side Two is a "still-frame catalogue" showing 1,645 works of art—paintings, sculpture, drawings, and prints—in the Gallery's collections. Following each image and every detail is a caption



photo: J. Swab

Many of NAL's visitors request to see demonstrations of the new laser disc. Here Ron Young searches the database and photo collection for materials on Maryland and Calvert County for Louis L. Goldstein (right), Comptroller of the Treasury of the State of Maryland, while NAL Director, Joseph H. Howard, and Alan Fusonie discuss the process, historical and educational benefits, etc., with him.

giving pertinent information on each work of art—artist, dates, title of work, date (if known), medium, dimensions, and donor. A printed index of the still-frame catalogue is provided with the disc; this lists the consecutive "chapters" into which the collections have been categorized and also lists each work of art by frame number. This is the section of the disc that is of particular interest to us—for its reference and research uses.

Having briefly described the disc, I should like now to say something about its origins, development, and our ideas about its use: in 1984, a short time after the videodisc was released, a reviewer in the *New York Times* wrote that:

A generation ago, Andre Malraux, the French critic, novelist, and sometime adventurer, commented on the accessibility of great paintings through reproduction. Printing techniques had reached new levels of refinement at the time, and to Malraux a well-crafted art book was a "Museum Without Walls." What might he have said of the latest video venture, which presents virtually all the major paintings at the National Gallery...on a single videodisc?¹

We had, of course, consciously set out to create a technological equivalent of a comprehensive, well illustrated art book. The analogy to Malraux, in particular, has been cited frequently since the publication of the National Gallery of Art videodisc. Our overriding interest, however, was in the potential of this new technology in serving one of the Gallery's main missions: education. And museum education, whether within the museum or beyond its walls, is concerned with providing access to the resources of the museum for audiences. Our most important resources are, of course, our collections. And our audiences range from the scholarly community, to schools and other groups in the grass roots communities in small towns throughout America.

What better way to expand our existing program—through which we have made available to national audiences



United States
Department of
Agriculture
Office of Public Affairs
and
National
Agricultural
Library

Analog Optical Disc Handbook

Ordering the Forest Service and Office of Public Affairs Laser Disc:

Address:

National Technical Information Service
U. S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 2261
Phone: (703) 487-4650
FAX (703) 321-8547

The Forestry laser video disc and database can be sold separately or as a package

Order Number:

Forest Service Laser Video Disc (PB90-504192)
Forest Service Laser Video Disc Database (PB90-504192)

Cost:

Forest Service Laser Video Disc	\$ 95.00
Forest Service Laser Video Disc Database	\$400.00

The OPA laser video disc and database must be sold together as a package

Order Number:

Office of Public Affairs Laser Video Disc and Database (PB90-504184)

OPA Laser Video Disc	\$ 95.00
OPA Laser Video Disc Database	\$350.00

Orders may be received by phone, FAX, or mail

(Top) The cover title of the handbook for the USDA laser disc of photos. This hand book and the one pictured on page 3 for the USDA Forest Service disc accompany the respective disks when purchased from NTIS. (Below) Ordering information for both discs (including handbooks) and both databases.

the publications, films, videocassettes, and slide programs we have produced — than to create the “ultimate, super-slide library,” one that is portable, easily scanned, limitlessly flexible, by producing a videodisc? These were some of our thoughts as we undertook the design and production of the first art museum videodisc.

As a museum educator and curator, I had been watching the progress of videodisc technology for some years — through the 70s — as a new way of making museum resources more accessible to audiences, and especially for its potential uses as a research tool and in educational programming. We also hoped that videodisc technology — or at least a videodisc on the Gallery’s collections — would serve other aspects of museum functions, such as registration, collections management, photographic services, slide library, and so on. However, it must be emphasized that the videodisc project was always intended and regarded first and foremost as an educational one, and it is in this area that it has been most useful.

So when videodisc Publishing, Inc., approached us (in 1979) and suggested that we work together in transforming John Walker’s large, 700-page volume, National Gallery of Art, into a videodisc, we were ready to consider and then accept their proposal.

The Walker book defined — roughly — the parameters of the disc, as it documented with color reproductions much of the Gallery’s collection. But we saw the videodisc as an opportunity to expand the number of works to reflect the true dimensions of our collections: to revise, to update attributions, title changes, to have greater control over the quality of the images; to add almost 500 paintings, including new accessions, and to include a selection of graphics — engravings, etchings, woodcuts, lithographs — that had not been represented at all in the Walker book. Our interest was, pure and simple, in creating a comprehensive catalogue of the collections in this new technology. (The two 25-minute programs on the history of the Gallery and a “tour” of the collections were not of great concern at the outset, but they did, in the course of production, require their share of research, writing, and “orchestration.”)

In the expectation that most of our efforts would be focused on the still-frame catalogue, we — the Gallery’s production team — needed to review the Walker book from curatorial point of view, with an eye to retaining all works represented but deciding on additions and corrections; all of this was accomplished in concert with our curators of collections, our Assistant Director, and the Director. The organization of the videodisc was planned with the Walker book as a rough guide, but also with art historical coherence, fidelity to collections, logic of presentation as primary criteria. Obtaining new, original visual materials — transparencies and slides — required many months of work, for we all shared the goal of creating a disc of the highest possible visual quality obtainable at the time. With extraordinary support and cooperation from the staff of Videodisc Publishing, Inc., we spent many months designing sequences of works; reviewing and proofing of captions for accuracy and style; supervising the transfer to video master; and picture-by-picture color correction — all steps involved in the production of the still-frame catalogue.

Originally we had hoped to imbed an interactive program of a very simple sort on the disc, that is, to create designated stops — points of reference — within the tour of our collections that would refer to the appropriate “Chapter” of the still-frame catalogue; but there were limits on both time and funds, so our disc is a true “Level I” disc. This is not incompatible with our original goal, namely, to create a basic resource — a catalogue, or as the people at Videodisc Publishing say “a visual archive,” thus pointing up its essential character — a research tool. Rather, we regard this lack of imbedded programming as an advantage, for the disc was intended for use by our very diverse audiences around the country; by encouraging our audiences to create their own programming around the disc, we are highlighting its value as a visual resource from which individuals can tailor programs to meet a particular teaching need and specific

research or instructional objectives.

We tend to refer to the Catalogue as a "visual database" and see it as a resource that provides a basis for the development of other educational programs.

At the time the disc was released, in 1983, the interest it evoked was mainly on the part of libraries and universities, and, again this was what we had expected—and in fact counted on, in that the disc is available not only for purchase, but also on a long-term, free-loan basis through the Gallery's Department of Education Resources/Extension Programs. Thus, we encourage libraries and universities (and other educational institutions) to retain the disc in order to permit faculty members and students to work with it and to have sustained access to it.

With the growing use of computers and greater ease of authoring—and the development of Hypercard applications, we feel that in the past few years the disc has come into its own. And, happily, its current widespread use confirms our hopes at the time when we were first considering this technology.

¹ Fantel, Hans, "Videodisc for National Gallery's Art," *The New York Times*, July 10, 1984.

Electronic Imaging in a Comprehensive Program of Photographic Preservation

by Jim Wallace

Director/Curator, Office of Printing & Photographic Services, Smithsonian Institution, Washington, DC.

Abstract: The various forms of electronic imaging which have recently become commercially available have the potential to provide dramatic new opportunities to distribute photographic images held by museums and archives. The use of such alternative distribution means should be an integral part of an overall photographic preservation program.



The USDA Photographic Collection on laser disc is a source of a great variety of historic and contemporary photos. This one numbered CEN-31 shows wheat harvesting using 38 horses: harvesting, cutting, threshing and stacking at Wells Fargo, Washington, about 1902. Photograph by Underwood and Underwood.

Background

An increasing number of video discs are being produced by organizations holding large collections of photographs. As these discs can contain up to 54,000 images per side, the cost per image of this format compares extremely favorably to more traditional methods such as microfilm. As the availability of electronic images continues to grow, an increasing demand for video discs has also been observed.

This in turn has led to new and innovative uses for these images, and a proliferation of new electronic imaging formats. Video discs, computer readable image files, CD-ROM storage, FAX transmission, desktop publishing, all are part of a growing variety of electronic imaging formats. Combined they hold the potential to increase vastly the capabilities of archives and museums to disseminate their photographic collections.

As computer literacy continues to increase, especially in the fields of education and publishing, these new formats have the potential to be even more useful to the end user than traditional photographic prints and transparencies.

Photographic Preservation

While electronic imaging has created a renewed interest in many photographic archives, it is of vital importance that the use of this new technology be part of a fully integrated program of photographic preservation.

It is also important to understand that the forms of electronic imaging which are currently available, do not have the resolution or image capture capabilities to replace traditional silver halide film. For instance, a widely used 35mm color slide film has the capacity to resolve 160 line pairs per millimeter. Electronic imaging—even High Definition Television—does not yet come close to this capability.

Further, electronic imaging cannot be considered an archival medium. It is accepted that silver halide film, stored under proper conditions, can be considered as archival. The electronic image, on the other hand, cannot. Even if future technology advances develop methods of insuring the preservation of magnetic or magneto-optical files, electronic images will still remain captives of their playback equipment.

Just as it is difficult to find a 78 R.P.M. turntable for sale today, there is no guarantee that a video disc player, or even a computer which reads MS-DOS, will be available over the mid-term future—much less in 100 years or more. Film, on the other hand, is completely human readable.

Therefore, electronic imaging in its present forms should best be considered as an alternative delivery vehicle for photographic images. Before considering delivery means, however, care must be taken to insure that the original photographic collection is properly catalogued, maintained and stored under archival conditions. This generally means the development and operation of cold storage facilities.

Once placed in cold storage, the photographs become difficult to view or use. It is at this point that electronic imaging becomes an important part of the overall program. Placing the photographs on standard analog video discs makes the images available for easy viewing without having to disturb or handle the originals which are in archival storage.



Among contemporary photos on the USDA disc is this research shot of chemical engineer Patricia J. Slininger working with a yeast called "odd" that converts xylose, or wood sugar, to ethyl alcohol. Here she loads a small continuous fermenter with tapioca-sized pellets cells at Peoria, IL, December 1981. USDA Photo 1281x1556-17a.

Electronic Image Distribution

Once a photograph has been placed on a video disc, the electronic image can be transferred into other formats, transmitted, and otherwise widely used. In the United States, video disc images are stored in standard analog NTSC television format.

This is both its biggest liability and its biggest asset. The liability comes from the poor resolution of NTSC television. The asset is derived from the near universal compatibility the format enjoys in this country.

This means the video image can be played back and viewed using practically any video disc player and television monitor. With the possibility of placing as many as 104,000 photographs on both sides of a single disc, vast archives can be easily and conveniently distributed almost anywhere. The accompanying data base of catalog information can be provided on a separate computer disk, or can be made available through a remote dial-up service.

Still video recorder/players can be easily used to store images edited from the larger discs. The 2-inch still video discs are becoming increasingly used for audio-visual presentations and for newspaper reproduction.

There are now FAX programs also available which can process the video images through personal computers and

then transmit them to any FAX machine in the world, complete with caption.

This means that images on a video disc can be viewed, selected and edited remotely without having to handle the original or remove it from archival storage.

Once an image has been selected for use, a photographic print or duplicate transparency can then be made and sent to the requestor. However, in a growing number of instances the end user really doesn't need a photograph. Rather the need is to publish the image using a desktop format. Depending on the publication means, size and quality of reproduction desired, etc., image files can be made directly from the video disc and transmitted to the user.

Since NTSC is an input format for most MS-DOS and Macintosh programs which deal with computer image files, these video images can actually be used to create a variety of desktop publishing files.

Assuming that a higher quality reproduction is needed, the most recent generation of electronic scanners can scan the photograph and create a file which can be used with state-of-the-art commercial printing systems. Once a photograph has been scanned, the file can be saved. Then if the same image is requested again, the original scan can be reused. In this way an archive's most popular photographs would only need to be scanned once—again helping to preserve the original's archival integrity.

Using PC's and modems, these high resolution scans can also be transmitted to newspaper wire service receivers, or to higher quality receivers at magazines and picture agencies.

The effects of electronic image use are only now beginning to be seen. New uses and applications will be developed as part of the continuing maturity of the technology.

Video quality will also see vast improvements in the immediate future. Several formats for High Definition Television have been proposed by manufacturers both in this country and abroad. Regardless of which format eventually becomes the new standard, higher resolution video images will certainly be the result.



A 20-acre irrigation reservoir near Amsterdam, Missouri is checked by owner Elvis Nelson and his son, Mark. When full, water is 17 ft. deep at the lowest point, but on August 1, 1980, that point holds 2 ft. Using lake water to irrigate his corn and soybeans, Nelson was getting 60% of normal yield, compared with area farmers without irrigation who experienced total loss. USDA photo No. 0880x871-14A, by Gordon Baer.

Conclusion

If adopted as part of an overall program of image preservation, electronic imaging can play a dynamic new role for archives and museums. The technology will enable them to maintain the archival integrity of their original photographs, while simultaneously increasing and facilitating their distribution, availability, and use.



This photo from the USDA disc shows 3-ton stacks of hay deposited in a single operation on the Sycamore Bend Plantation near Hughes, Arkansas, by Hesston "Stackhand." USDA—Soil Conservation Service Photo No. Ark-62,447 by Thomas A. Moore.



News Notes

New Research Database Available from NAL

Beltsville, Maryland—The National Agricultural Library (NAL) has developed a computer database containing information on research and education grants awarded by the American Floral Endowment (AFE) since 1961, when AFE was established.

Printed copies of the database are available from NAL or the database can be accessed through NAL's computer bulletin board called ALF (for Agricultural Library Forum).

The database was developed by NAL through a grant from AFE and provides access to information on AFE research and education grants and to citations on publications that resulted from AFE grants.

"This information may be used in grants planning to avoid costly duplication," said Shirley Edwards, head of NAL's Indexing Branch and coordinator of the database project. "The database also can be used to evaluate past and future areas of industry interests and to follow-up on the conduct and documentation of work in progress. It's a valuable reference source for contracts, too."

Edwards said that the database can be searched by grant subject area, project leader/author, title word, university, or state. The database also allows a person to determine the number of records on a particular subject, the total grant money awarded to a university, and other helpful information.

Subject areas included in the database are: economics and marketing of florists' products (ECON), energy (ENER), new crops (NEWC), pest management—diseases and nematodes (PES1), pest management—insects and mites (PES2), plant breeding (PBRE), post-production studies (PPRO), production technology (PTEC), horticulture (HORT), physiology (PHYS), and other areas (OTHR).

The software required to access the database is dBase III Plus. Edwards said that the database contains two parts; one with grant information and the other with citations to resulting publications.

"Over 400 records are contained in the database and are linked to each other via project numbers," Edwards said. "It is possible to search the two parts of the database together or separately."

To access the database through ALF via a microcomputer-modem system, dial area code 301 and then either 344-8510, 344-8511, 344-5496 or 344-5497. Use the computer settings "n" (no parity), "8" (eight data bits), "1" (one stop bit), full duplex and 1200 or 2400 baud. Answer "None" or "No" to questions about graphics and highlighting that

are asked at initial registration.

From the main menu screen (M), type "F" (Files Subsystem). An error-checking method such as XMODEM must be used to download the dBase III Plus files. For assistance in using ALF, Edwards recommended people call the ALF system operator, Karl Schneider, at (301) 344-2113.

Requests for a printed copy of the database should include the NAL call number aSB406.64.D3 and should be addressed to:

*Document Delivery Services Branch
National Agricultural Library, Room 300
10301 Baltimore Boulevard
Beltsville, Maryland 20705*

Or call (301) 344-3503.

—Brian Norris

ISIS Update

Over 100,000 indexing records are now available for on-line searching through ISIS, NAL's Integrated System for Information Services. The dates of these retrospective records are from January 1989 through May 1990.

When searching ISIS, the user will have the choice of searching monographic and serial records, indexing records, or a combination. Users will not need to change their logon procedures in order to take advantage of this new capability.

Plans are underway to bring the indexing database up to date by loading indexing records created since June 1, 1990. This is an essential addition to ISIS, particularly for researchers who require the most current information.

The indexing input system, which is in development, will enable users to search indexing records as soon as they are created. This capability will be available by mid-1991.

—John L. Stetka, ISD, NAL

NAL Changes Subject Terms in AGRICOLA Database

Users of the National Agricultural Library's AGRICOLA database need to know that beginning with the December 1990 AGRICOLA monthly sale tape, indexing records in AGRICOLA will carry subject terms from the 1990 *CAB Thesaurus*. Since 1985, AGRICOLA had used subject terms from the 1983 edition of the *CAB Thesaurus*. (The 1988 edition was not used by NAL for indexing.)

NAL uses the *CAB Thesaurus*, published by CAB International, to index literature citations to journal articles and book chapters in AGRICOLA. The thesaurus is designed for use in indexing both CAB Abstracts and the AGRICOLA database.

According to Martha Hood, NAL Thesaurus Coordinator, "since the 1983 edition of the *CAB Thesaurus* was

published, the number of subject terms has increased from 48,000 to 56,000, hierarchies have been revised and synonymous and redundant terminology has been weeded out."

Hood said, "The 1990 edition contains improved terminology for indexing biotechnology and immunology and adopts the new classifications for plant viruses approved by the International Committee on Taxonomy of Viruses."

Hood explained that "AGRICOLA covers some subjects not within the scope of CAB Abstracts. Approximately 1200 descriptors in these subject areas, primarily human ecology and aspects of food service and food technology, have been added to the thesaurus and are identified with the tag '(AGRICOLA).'" American variants of British spellings and usages are included and are clearly identified, Hood said. American variants are used in AGRICOLA indexing and British variants are used in CAB Abstracts indexing.

History notes in the thesaurus are now included to indicate when terms were added, deleted or changed. These history notes only show changes which have occurred since 1988.

To purchase copies of the *CAB Thesaurus* in North America contact:

CAB International

845 North Park Avenue

Tucson, Arizona 85719

Telephone: (602) 601-7897 or toll-free (800) 528-4841

Telex: 910-952-1143 AZU TUC

Fax: (602) 621-3816

For additional information about NAL's use of the thesaurus contact:

Martha Hood, Thesaurus Coordinator

National Agricultural Library

Technical Services Division, Indexing Branch

10301 Baltimore Blvd.

Beltsville, Maryland 20705

Telephone: (301) 344-3829

—Brian Norris

Consumer Organization Salutes Safe Food Trailblazers

The Center for Science in the Public Interest (CSPI), a national health and nutrition advocacy organization, announced today that nine individuals, non-profit organizations, and companies have won its annual "Safe Food Trailblazer" awards. CSPI is a nonprofit consumer advocacy organization representing 230,000 members nationwide.

The winners include Sen. Patrick Leahy (D-VT), author of the 1990 Organic Food Production Act; Fred Kirschenmann, manager of a 3,100-acre organic grain and livestock farm; Jayne T. MacLean, Coordinator of the Alternative Farming Systems Information Center at the National Agricultural Library; Sunset Foods, a small Chicago area supermarket chain; and M.A. "Buddy" Maedgen Jr., insect



photo: D. Starr

Jayne MacLean

tory owner and winner of a battle with the Food and Drug Administration over beneficial insects.

The annual awards salute outstanding achievement in promoting consumer information and choice in the food marketplace and initiating policies and programs that help American agriculture move away from the use of potentially dangerous pesticides and veterinary drugs.

Michael Jacobson, CSPI's executive director, said, "We honor the Trailblazer award winners for taking action that made a difference in bringing about change in the marketplace, state government, Congress, and Federal regulatory agencies."

"Consumer anxiety continues despite government agency assurances that the food supply is safe," he said. "The actions taken by the Trailblazers represent important steps toward reducing the use of potentially dangerous chemicals and toward restoring health and environmental considerations as high priorities in agriculture."

These are the winners and the specific achievements cited:

1990 Safe Trailblazer Awards

Jayne T. MacLean, coordinator of the Alternative Farming Systems Information Center at the National Agricultural Library, for leadership in developing the center and making it an increasingly valuable and accessible national resource for extension workers, researchers, scientists, and others interested in alternative farming methods. MacLean stands out as one of the first USDA employees to openly support alternative agriculture. (Address: Alternative Farming Systems Information Center, National Agricultural Library,

U.S. Department of Agriculture, Beltsville, MD 20705; Phone: 301-344-3704).

Senator Patrick Leahy (D-VT), Chairman of the Senate Agriculture Committee, for proposing and winning passage in 1990 of the first comprehensive national organic food standards bill. Leahy also proposed and fought for a series of sustainable agriculture measures, including more money for the Low-Input Sustainable Agriculture (LISA) program, that were incorporated into the farm bill.

Representative Peter DeFazio (D-OR) for introducing in the House the first national organic standards legislation and leading the floor fight that led to its adoption as an amendment to the 1990 farm bill. The DeFazio-led forces challenged the House Agriculture Committee on the floor of the House and decisively defeated a USDA-backed substitute calling for delay and further study.

Fred Kirschenmann, manager of a 3,100-acre organic grain and livestock farm near Windsor, North Dakota, for demonstrating the economic viability of organic farming and providing national leadership in the development of organic/sustainable organizations and institutions. These accomplishments have given him enormous credibility within both alternative and conventional agricultural circles and enabled him to emerge as a respected organic industry leader and spokesperson.

M.A. "Buddy" Maedgen Jr., owner of a Mathis, Texas, insectory that markets biocontrol alternatives to pesticides, for waging a long and successful fight to overturn a Food and Drug Administration ban on the use of beneficial insects to control pests in stored grain.

Jean Wallace Douglas, president of the Wallace Genetic Foundation, Washington, DC, for being the first major U.S. funder to recognize and understand the importance and relevance of alternative agriculture. Her early personal interest and financial support for small nonprofit organizations that struggled to move the sustainable agriculture issue onto the public agenda have been crucial to their success.

Sunset Foods, a small supermarket chain in the Chicago area, for demonstrating leadership in the food industry by providing consumers with full information on post-harvest treatments of fruits and vegetables. In response to consumer requests, Sunset Foods promptly displayed on produce bins the shipping carton labels containing information about wax and post-harvest pesticide applications.

Lynn Coody of Oregon Tilth for developing a methodology for evaluating organic agriculture inputs that has become a national model. Her evaluation methodology was incorporated in Oregon's new organic food law and provided the basis for inputs evaluation provisions in the organic food production title of the 1990 farm bill.

Wisconsin Rural Development Center, a rural advocacy organization, for obtaining state funding for a new Center for Integrated Agricultural Systems at the University of Wisconsin at Madison, providing leadership in developing the Wisconsin Department of Agriculture's Sustainable Agriculture Demonstration Program, and helping develop a high school curriculum on sustainable agriculture. WRDC's success provides a model for public/private cooperation in the sustainable agriculture field.

— CSPI, 1875 Connecticut Avenue, N.W., Suite 300, Washington, DC 20009; Phone: 202-332-9110.

NAL Produces Video News Story On Text Digitizing

The National Agricultural Library recently produced a video news release (VNR) on the National Agricultural Text Digitizing Project. The VNR featured interviews with Pam Andre, NAL Associate Director for Automation, and Nancy Eaton, Dean of Library Services at Iowa State University.

The 2 1/2 minute video gives a general overview of what text digitizing is, stressing the preservation aspect of the project and also mentioning how text digitizing improves access to library materials.

The VNR was broadcast over various satellite coordinates four times in late September, preceded by a written advisory on the story that went to 775 television stations nationwide. The advisory gave a summary of the story and instructed television news departments when and where to tune their satellite dishes to receive and record the story.

NAL contracted with a private company to monitor the use of the VNR by television news departments. In about two months the library will receive a written report on how much airtime the story received.

Brian Norris, NAL Public Affairs officer and the writer, producer, director, and narrator for the spot, said that stations were free to use all or parts of the story in their news programming. "A VNR is just like a written news release in that once editors or news directors have it, they can cut it to fit their needs."

Norris also said that a news director may use only the video from the spot and have one of the station's own reporters narrate it, or parts of the spot may be combined with another report the television station is doing. "The ideal situation would be for the station to be so excited about the story that they would send their own crew to expand on it. Once they spend their money, it is almost a guarantee they will run the story."

The cost for the VNR was roughly \$8,000. This included hiring a video camera person for three days of shooting (one day at NAL, two days in Iowa), costs for a camera crew (director and cameraperson) to go to Iowa to tape an interview with Nancy Eaton, a half day for editing the videotape, one hour in a studio to narrate the spot, the notification of television stations and several other services.

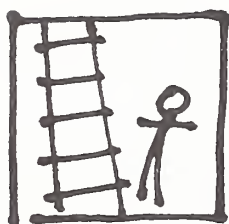
With the footage shot for the VNR, Norris intends to produce a 5- or 10-minute video on text digitizing for general NAL use. He also produced several radio stories from the video interviews he did with Andre and Eaton. These stories were broadcast over the USDA's Radio Newsline, a daily program of reports on USDA activities which is available to radio news departments worldwide.

"You always wind up with more videotape than you need for a short news story, so you should keep in mind that you can expand the story for internal or other uses," Norris said. "It is easier to justify the expense of videos when you can produce several products for the cost of one video shoot. It's just good management."

The VNR is a relatively new concept in the public rela-

tions profession. It is a short (usually no longer than 2 1/2 minutes) news report produced and distributed by an organization on that organization's activities. Norris stressed that in order for it to be used by television news it indeed must be newsworthy. "News directors are receiving more and more VNRs and they are very skilled at weeding out those that are blatant, or even subtle, attempts by an organization simply to publicize itself."

Norris said the jury is still out on how well received or used these stories are by the news media. He said he has talked to news directors who said they would not use a VNR under any circumstances, and others who welcome them. The U.S. Department of Agriculture, NAL's parent agency, has been producing programs of VNRs and broadcasting them over its satellite network for several years.



Youth Development

National Agricultural Library Exhibits 4-H Memorabilia

In recognition of National 4-H Week, October 7-13, the National Agricultural Library (NAL) set up an exhibit featuring 50 years of 4-H memorabilia and photographs. The official opening ceremonies were held in the NAL lobby on October 2. Speaking at the ceremony were Leah Hoopfer, the Deputy Administrator of the National 4-H Program; Russell Weathers, Vice President of the National 4-H Council; and Joseph H. Howard, NAL Director.

Trish Marsh, a Maryland 4-H'er and a freshman at the University of Maryland, also talked about her 4-H experiences and what being a 4-H'er has meant to her.

"A particularly exciting part of the display is the U.S. and U.S.S.R. youth farm photo exhibit," said Sandy Facinoli, one of the organizers of the exhibit at NAL and also the coordinator of NAL's Youth Development Information Center. "It features 60 prize-winning photographs of farm life taken by members of 4-H and the Soviets' Young Pioneers program."

Facinoli said the U.S.-U.S.S.R. photo display is sponsored by the Eastman Kodak Company and has been on tour throughout the United States and the



photo: J. Swab

Dr. Leah Hoopfer, Deputy Administrator, 4-H, Extension Service, USDA.

Soviet Union. "Thirty of the photographs were taken by American children and thirty by Soviet children. The photographs show each country how people in the other country work, play, and live."

The NAL 4-H exhibit also features photographs of 4-H activities dating back 50-years, including photographs of 4-H members with U.S. Presidents from Taft to Reagan.

The exhibit, in the NAL lobby, is open to the public, during the months of October

through December, and perhaps into January 1991. NAL is open Monday through Friday, from 8:00 a.m. to 4:30 p.m. (except Federal holidays).

4-H is the youth education program conducted by the U.S. Department of Agriculture, state land-grant universities and county governments. Members of 4-H work on projects that contribute to energy conservation, environmental improvement, community service and food production. The program aids youth in making career decisions and in improving health, nutrition, home and family relationships.

— Brian Norris



photo: J. Swab

Sandy Facinoli, Coordinator, Youth Development Information Center, and concluding speaker at the opening ceremonies, is seen here with part of the Exhibit of 4-H Memorabilia from the National 4-H Council's collection.



photo: J. Swab
Russell Weathers, Vice President, National 4-H Council.



photo: J. Swab
Trish Marsh, Maryland 4-Her, and Freshman, University of Maryland



photo: J. Swab
Joseph H. Howard, Director, National Agricultural Library.

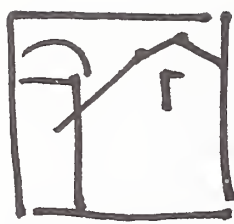


photo: J. Swab
Sandy Facinoli and Robyn Frank, Head, Information Centers Branch are seen with the 4-H traveling exhibit, which is at NAL as part of the exhibit "4-H For Youth For America, A Retrospective Exhibit of Photos, Books, and Artifacts."



photo: J. Swab
Alan Fusonie, Head, Special Collections, NAL, and Master of Ceremonies





**Alternative
Farming
Systems**

National Sustainable Agriculture & Natural Resources Conference

by Jayne MacLean, Coordinator
Alternative Farming Systems Information Center, NAL

A National Sustainable Agriculture & Natural Resources Conference was held in Lincoln, Nebraska, August 15-18, 1990, with 16 sponsors (see box on this page) including several USDA agencies, three universities, and private and non-profit organizations. Promoted as "A conference for those who want to design a profitable agriculture that is environmentally sound, resource efficient, socially acceptable, and thus sustainable for the future," the meeting focused on current policy, inter-organizational team-building, and economic aspects of sustainable agriculture.

Many speakers struck basic chords in discussing sustainability. Fred Kirschenmann, a noted farmer from Windsor, North Dakota, reminded us that "a farm is not an industry; it is a biological organism, full of many sub-organisms," and that "agricultural efficiency depends on a professional farmer living on the land, making the decisions." On team-building, Mitch Giesler of the Extension Service, USDA, provided the national Extension perspective and a list of imperatives which included cooperation and networking with a diverse clientele. Robert Rodale, of Rodale Press, said, "we have a 'radical' agenda, to make America sustainable." He pointed out that radical means something deep-rooted, like a radish. University of Missouri's John Ikerd continued the theme, saying "what we must work for is not 'sustainable agriculture,' but the sustainability of all agriculture in perpetuity."

A major segment of the program featured presentations describing 48 examples of successful projects under way. Among the examples dealing with information activities were the Alternative Farming Systems Information Center (AFSIC) of the

National Agricultural Library, the Institute for Alternative Agriculture, and the ATTRA center (Appropriate Technology Transfer for Rural Areas).

Harry C. Mussman, Deputy Assistant Secretary of Agriculture, gave a key address, as did Jim Mosely, Assistant Secretary of Agriculture for Natural Resources & Environment, and Victor Kimm, Deputy Assistant Administrator, Environmental Protection Agency. Other high level speakers from Washington, D.C. were heard by videotape. Small group meetings were provided for during the meeting to encourage regional interactions. There was also an exhibit area. NAL's Alternative Farming Systems Information Center (AFSIC) staff gave demonstrations of the AGRICOLA database and distributed over 800 publications.

Following the conference, a choice of three all-day Saturday tours was offered. The one chosen by Jane Gates and Jayne MacLean, AFSIC, covered 260 miles of eastern Nebraska and western Iowa, visiting three organic or low input farms, an organically farmed wildlife refuge and the



Mead, NE, Agricultural Research and Development Center. Buses left Lincoln at 8:00 AM and returned at 9:15 PM, and the consensus among the weary travelers was that we had really gotten our money's worth!

Photos courtesy of Jane MacLean:

(Facing page, top) Jane Gates (right) discusses AFSIC services with a conference participant in the AFSIC exhibit at Lincoln, Nebraska.

(Facing page, bottom) Jayne MacLean (center) and part of tour group at Jim Bender Organic Farms, Weeping Water, Nebraska.

(This page, top) Jim Bender (seated right on tractor wheel) describes his successful farming system; audience is seated on hay bales in Bender's barn.

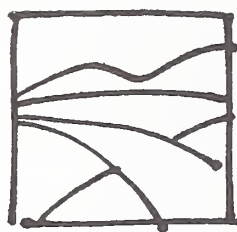
(This page, center) Tour group listens to Del Akerlund who reviews his crop rotations and fertility methods at his farm in Valley, Nebraska.

(This page, bottom) Visit to famous experimental plots, established in 1975 at Mead, Nebraska. The plots demonstrate long-term crop rotations.



National Sustainable Agriculture & Natural Resources Conference Sponsors

Agricultural Research Service
American Forestry Association
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DuPont Company Agricultural Products
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Extension Committee on Organization and Policy
Iowa State University
Nebraska Sustainable Agriculture Society
Rodale Institute
Soil and Water Conservation Society
Soil Conservation Service
U. S. Department of Agriculture
U. S. Environmental Protection Agency
University of Missouri
University of Nebraska
Wildlife Management Institute



**Rural
Information
Center**

Rural Health Information Available at NAL

Communities in the United States can now get information on rural health care issues through the Rural Information Center Health Service (RICHS) at the National Agricultural Library. RICHS can be reached toll-free by dialing 1-800-633-7701.

The information service began operation in October 1990 and is being funded by NAL and the Office of Rural Health Policy in the Department of Health and Human Services. RICHS is a clearinghouse for information on a broad range of rural health topics including health service delivery, health personnel, policy, services utilization, financing, and the health status of various groups of Americans.

According to Patricia John, Coordinator of NAL's Rural Information Center, under which RICHS operates, "the targeted user group for RICHS is anyone interested in rural health issues, especially health care professionals, researchers, extension agents, educators, all levels of government, and health-related groups."

John said, that among many services, the RIC/RICHs staff assists rural health groups to obtain answers to health-related questions, acquire research information, and identify funding sources for upgrading rural health programs.

— Brian Norris

Rural Information Available Toll-Free from NAL

An information service to assist rural citizens of the United States improve their communities is now available toll-free, 1-800-633-7701, from the National Agricultural Library's Rural Information Center (RIC), which has been in operation nationally since 1988. According to Patricia John, RIC Coordinator, the toll-free telephone number has been added to make it easier for rural communities to obtain the information they need. "President Bush's 1990 rural economic development initiative recommended that RIC provide quick, trouble-free access to the nation's rural communities," she said. "We feel that toll-free calling meets that recommendation."

John said the center provides information on rural economic revitalization, local government planning projects, rural health services, funding for rural development projects, research studies, and other topics related to "main-

taining the vitality of America's rural areas." RIC's clientele includes local governments, community organizations, extension services, health professionals, universities, libraries, businesses, and citizens of rural communities.

RIC is a joint project of the U.S. Department of Agriculture's Extension Service and NAL and is located at the library in Beltsville, Maryland.

"We combine the technical, subject-matter expertise of Extension's nationwide educational network with the resources, including personnel, of NAL," John said.

— Brian Norris



**Staff
Update**

Shilts and Shilts Intern in RIC/RICHs

The Rural Information Center (RIC) and its Rural Information Center Health Service (RICHS) have as their latest interns from Clarion University of Pennsylvania, Center for Study of Rural Librarianship, a married couple, Carla and Tom Shilts.

Tom Shilts is working with RIC where in addition to getting experience in providing reference service and learning the spectrum of services provided by the center, has been working on bibliographies in the area of affordable housing for the rural community, and on fee hunting and fee fishing on private lands.

While participating in all of the activities of RICHS, Carla Shilts has been concentrating on several health related bibliographies as her special projects, one concerning strategies for maintaining health services in rural areas, and another on strategies for retaining or recruiting rural health personnel.

Both are originally from Michigan, where each earned a B.A. at Lake Superior State University at Sault Ste. Marie, Carla's in Biology and Psychology, and Tom's in English. They began their internship at NAL on September 10, and completed it on December 7.

Speaking of their experiences at NAL, Carla said, "It's been very nice to be here getting introduced to NAL and the international connection, getting training and experience. Everyone's been very nice." Tom added, "It's great seeing the other side of the library world; at Clarion the emphasis is on small libraries. At NAL you see the large library. Furthermore, when you look up holdings in OCLC and there are only a few listings, often two or three of them are within a short driving distance." On completion of their intern-

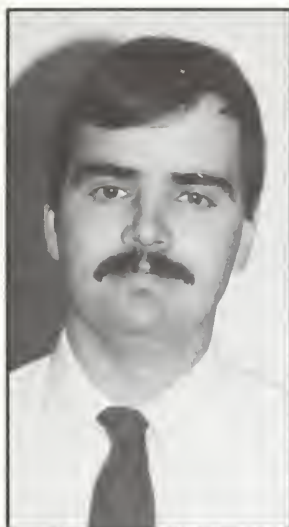


photo: J. Swab

Tom Shilts



photo: J. Swab

Carla Shilts



photo: J. Swab

Dirkje van Donselaar

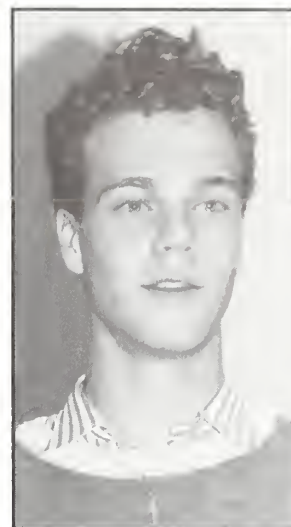


photo: J. Swab

Olaf van der Wiel

ships, both Carla and Tom Shilts will be returning to Clarion to complete their M.S.L.S. degrees. Tom Shilts has accepted a position as a public services librarian at the Presque Isle County Public Library in Roger City, MI.

—Joseph N. Swab

Two Students from The Netherlands Have Practicum at NAL

During the past year the National Agricultural Library and the Haagse Hogeschool, Sector Economic en Management, Bibliotheek en Documentaire Informatie, have agreed on a Practicum program at NAL for library and information science students from the school in The Hague, The Netherlands. The practical training is an integrated part of the educational program of the school and provides the student direct experience in library and information science practice in its widest sense from an institution or organization either totally or partially operating in the information business, according to the synopsis of the program. The objectives of the practicum for the student are to:

- Test theory in practical situations.
- Check one's image of library/information work with reality.
- Gain skills in the application of theoretical knowledge.
- Gain insight in the role of information provision within society.
- Judge theory based on one's own practical experience.
- Gain insight in one's own professional capacities and possibilities.

The Practicum takes place during the student's third year of the educational program from September through February.

The first two students to come to NAL under the program are Dirkje van Donselaar from The Hague and Olaf van der Wiel from Sassenheim. The two arrived in the U.S. on September 8, began working at NAL September 12, and will be here till February 1991. Their program at NAL involves an overview and orientation to the library and other major libraries in the Washington, D.C. area, five weeks in each division of NAL, Technical Services, Public Services, and Information Systems, and preparation of a final report. There are various other opportunities to participate in professional activities in the metropolitan area as schedules permit.

Ms. van Donselaar indicated that her particular interests were in information storage and retrieval, technical services, and NAL's information centers, especially Agricultural Trade and Marketing, Family, and Rural. When asked about her future, she replied, "I'm not sure yet what I want to do after my graduation, but I'm sure that I don't want to work in a public library." Of her other interests, she said, "I like to play golf in my spare time. While I'm in the USA, I'm trying to expand my collection on Martin Van Buren."

Mr. van der Wiel is particularly interested in information storage and retrieval using new technology. Speaking of earlier exposure to agriculture, he said, "During the last summer holiday I worked in a bulb nursery to earn money for my trip to the U.S. So all I know about agriculture has to do with flowers and bulbs." In talking about his future, he said, "I talked with a lot of people from developing countries, and they told me about the problems their libraries have. I think I want to work in an international organization for such libraries, since because of our technology, they are becoming more and more behind."

—Joseph N. Swab

Lassanyi Returns to NAL from COMSCI Fellowship



photo: D. Starr

Mary Lassanyi

On July 9, 1990, Mary Lassanyi, Agricultural Trade and Marketing Information Center (ATMIC) Coordinator, completed a 10-month COMSCI Fellowship Program and assignment at the Department of Commerce, Office of the Assistant Secretary for Technology Policy, Technology Administration, International Technology, Policy and Programs.

In speaking about her experiences in the program Ms. Lassanyi said, "The

COMSCI Fellowship Program provided me with an insight to the technology transfer programs, development of U.S. industrial competitiveness, innovativeness of American firms, and the new global challenges facing the United States."

Her participation in a broad range of weekly seminars and hearing a large number of speakers "provided an in-depth review of the key issues of science and technology problems and policies," she said. This was coupled with a week-long educational field trip to industries and institutions in the Chicago area which "allowed examination of broad issues of national scope." A week's orientation on Capitol Hill provided an insiders view of "the operations and role of Congress and the relationship of the Legislative to the Executive Branch."

Ms. Lassanyi said, "Participating in the activities of the Office of the Assistant Secretary added to my expertise in policy and international program development; technology transfer for development such as the India Program and the French-American Cooperation program; joint ventures activities; Eastern Europe initiatives; cultivating private sector awareness of, and participation in international research and development opportunities, and use of scientific and technology information sources. I also had the opportunity to work with other Federal agencies and to participate and represent the Department of Commerce on the Committee on Infrastructure, Science, Education, and Technology (CISSET) EC'92 Subcommittee meeting on Human Resources."

Relating the COMSCI Fellowship experiences to her role as Coordinator of NAL's Agricultural Trade and Marketing Information Center (ATMIC), Lassanyi said, "As a consequence, through the COMSCI Fellowship Program, I gained a better understanding of the national and international

challenges facing the U.S., the barriers U.S. industry must overcome, and the issues that impact on U.S. competitiveness, while the exchanges with the other fellows in the program have provided a further appreciation of their perspectives and agency programs."

During Ms. Lassanyi's absence, Wayne Olson of NAL's Reference and User Services Branch was designated as the ATMIC Acting Coordinator. Ms. Lassanyi praised Mr. Olson and said, "Our special thanks to Mr. Olson for his services to the agricultural trade and marketing community and other interested users. He deserves many *kudos* for a job well done."

Now that she has returned to NAL and ATMIC, Ms. Lassanyi said she is concentrating her attention on "enhancing and strengthening ATMIC's capabilities." Her goals for the immediate future of the information center include: "developing networking with institutions and individuals with international and national responsibilities in agricultural trade and marketing, and utilizing cooperative efforts to develop a database directory on agricultural trade and marketing."

—Joseph N. Swab

Headley-Ayotunde Interns in FNIC

Beverley Headley-Ayotunde is a graduate student working for the Food and Nutrition Information Center as part of a cooperative agreement between Howard University and NAL with EEO funds provided by the Director's Office, NAL. She is a Ph.D. candidate in the School of Human Ecology studying nutritional biochemistry. Her masters degree in microbiology and bachelor's degree in medical technology are also from Howard University.

Originally from Jamaica, Beverley came to Washington, DC, twenty years ago to join her parents. She still lives in the D.C. area with her husband and three children. She plans to pursue a career as a health professional and researcher and has a special interest in working with children.

—Sandy Facinoli



photo: J. Swab

Beverley Headley-Ayotunde

Bruce Retires



photo: J. Swab

Louise Bruce

After nearly 39 years in the government, the last 10 with the National Agricultural Library, Louise Bruce retired at the end of November. As the Facilities Manager for NAL, she has with efficiency and friendly tender loving care taken care of everything from major moves to drafts on the back of one's neck, from day-to-day management of contracts for services such as janitorial, to remodeling of entire floors or major repairs to the building and its equipment

such as replacing the buried oil storage tank, a leaning retaining wall, an ailing air-conditioning system, and out-grown electrical system. From NAL's limited budget she has operated the building with such efficiency that she was able to make many environmental and aesthetic improvements, such as carpeting in work spaces previously having only tile on concrete floors, draperies and light filtering and insulating panels on the windows, refinished or replaced furnishings, plants and floral displays in public areas and offices, and renovation of the 14th floor balconies to convert them from abodes of pigeons to reception and dining areas. She always provided extra help and good taste and her personal touch to the arrangements for official receptions and meetings, and also to staff functions such as retirement parties, frequently providing decorative items from her own personal belongings. But it is the cheerful, quick, and effective response to daily needs of staff that endeared her to everyone and for which she will be most missed by NAL, other USDA personnel with offices in the building, visitors, and Library users. Persons who gathered to wish Louise well at her retirement reception in November formed possibly the largest crowd ever assembled at NAL for such a function.

Louise began her government service with the Army-Air Force at Gravelly Point, National Airport, in 1942, and soon moved to the Pentagon in the Air Force classified mail room. After the war she worked in the War Assets Administration disposing of excess aircraft and parts. She left the government in 1948 to marry, and spent over two years with her family at the American Embassy in Prague, Czechoslovakia, and four years with the American Consulate in Zurich, Switzerland. In 1956 she returned to government employment in property management for the Agricultural Re-

search Service, where she worked until joining the NAL staff. She is the only woman building manager known to us. Of her time at NAL, Louise said, "I've enjoyed every minute of it."

In retirement Louise said, "I'm going to Florida next year and will open an antique shop." She had one once in Virginia. "I'm an antique nut," she said. "I love going to old country auctions and estate sales. I go every time I get a chance." She will also be enjoying life with her three children, three stepchildren, and four grandchildren. "Someday I also hope to come back and see another NAL building next to this one," Louise said, "—loaded with compact shelving—but not another high rise!"

—Joseph N. Swab



photo: J. Swab

(Above) Louise Bruce holds a basket of flowers given to her by contractors with whom she has worked over the years.

(Below) Louise receives gifts from the NAL Staff, presented by Joseph H. Howard, NAL Director, and Diana Lemon, Administrative Support Assistant.

photo: D. Starr



NAL's Associate Directors Receive USDA Superior Service Awards

Pamela Q. J. Andre, Associate Director for Automation, was cited for "Successful adoption of advanced information technologies for library operations." Her nomination included accomplishments in the areas of text digitizing, development of CD-ROM products, installation of NAL's integrated library system, publication and consultation on these subjects nationally and internationally, and overall leadership.



photo: J. Swab

Keith Russell, Associate Director for Public Services, Pamela Andre, Associate Director for Automation, and Sarah Thomas, Associate Director for Technical Services, NAL.

At the United States Department of Agriculture's 44th Annual Awards Ceremony earlier this year, the three NAL Associate Directors received the Department's Group Achievement—Superior Service Awards "For significant improvements in library services and operations through outstanding leadership." The awards were presented by Secretary of Agriculture, Clayton Yeutter, before a standing-room-only crowd of more than 1100 employees and guests at the Departmental Auditorium in the Commerce Department Building on June 13, 1990.

Keith W. Russell, Associate Director for Public Services, was cited for "Exceptional leadership in the improvement of public services at the National Agricultural Library." His nomination detailed increases in the number of users of the library as "a result of improved lending practices and new information services." Areas highlighted included development of NAL's information centers with recognition and funding from USDA agencies, private industry, and individuals; advocacy and implementation of new technologies and ideas such as expert systems for reference advisory services, self-service searching, electronic bulletin board, use of electronic communication technology for receipt of requests and telefacsimile delivery of documents, and imaginative utilization of personnel.

Sarah E. Thomas, Associate Director for Technical Services, was cited for "Improved and enhanced NAL database through internal improvements and cooperative participation." The nomination specified that "Dr. Thomas has substantially improved the quality and coverage of the database through a variety of changes and new thrusts." Highlighted were cooperative cataloging and access programs with 47 state land-grant libraries, coordination of the establishment of the United States Agricultural Information Network (USAIN) and consequent networking, use of new technologies including optical scanning and computer-aided instruction, effective reduction of backlogs, and national and international recognition of her expertise.

In August the National Agricultural Library held a reception in honor of the three award recipients. Their families, guests, and NAL staff attended the reception on the 14th Floor of the Library. NAL Director, Joseph H. Howard, presented to Pamela Andre, Sarah Thomas, and Keith Russell, certificates documenting the awards.

The Associates of NAL, Inc., provided refreshments for the reception.

—Joseph N. Swab



photo: B. Norris

Pamela Andre, Sarah Thomas, and Keith Russell accept certificates for their USDA Superior Service Awards, presented by NAL Director, Joseph Howard.



photo: B. Norris

Pamela Andre and members of her family, her husband, Jim Andre, her daughter, Stacey Jensen, and granddaughters, Leigha and Charlotte Jensen.



photo: B. Norris

Sarah Thomas with members of her family, (l-r) her husband, Peter Hirtle; sons, Carter and Fletcher Hirtle; Sarah; Sille Esbjerg; Sarah's mother, Marie Packard; and Robert Turner.



photo: J. Swab

Clayton Yeutter, Secretary of Agriculture, addresses the assembly of award recipients, guests, and USDA staff before presentation of the awards.



photo: B. Norris

Julia Blixrud with Keith Russell.



photo: J. Swab

Pamela Andre accepts the USDA's Group Achievement—Superior Service Award for herself, Sarah Thomas, and Keith Russell, from Secretary of Agriculture, Clayton Yeutter.

USAIN Meets at ALA Midwinter

USAIN will meet on Tuesday, January 15, from 2:00-4:00 p.m., at the Congress Hotel, Alcove Room, Chicago, Illinois.

Following the meeting Idalia Acosta, Head, Cataloging Branch, NAL, will chair a meeting of the State Publications and Cooperative Cataloging Projects, from 4:00-4:30 p.m.



photo: J. Swab

Linda Braun

Volunteer in Aquaculture

The Aquaculture Information Center depends on the support of several volunteers to assist with services that are provided. One of Aquaculture's most active volunteers is Linda Braun, who joined the Center as a part-time volunteer in July of 1988. This current fiscal year Linda has donated a total of 253 hours, which translates into a significant dollar value of \$2,637.00 in staff time. This contribution is in addition to her full time position with the Agricultural Research Service as a biological laboratory technician in the Vegetable Laboratory. Her duties at ARS include assisting the Research Plant Geneticist with technical support in the laboratory, field, and greenhouse.

Linda's diverse background in horticulture has provided the Aquaculture Information Center with needed expertise in aquatic plant culture and taxonomy. She assists Aquaculture clients with literature searches, responds to information requests, produces useful publications, and enhances collection development in aquaculture; all at the end of her regular workday. The Center receives acknowledgements regularly from patrons who appreciate Linda's thorough, rapid, and friendly responses. She has helped to make the AIC volunteer program a true success!

Linda received her B.S. degree in the field of horticulture in 1981 and a B.A. in German in 1971, both from the University of Maryland. In addition to her work with ARS and NAL, Linda enjoys gardening, foreign languages, and aiding homeless animals. She has a son, Walter, 20, who is presently an exchange student studying in Vienna, Austria.

— Eileen McVey

New Employees – 1990

The new employees photographed here were introduced to library managers and other staff over the course of several months. Some are full-time, some part-time, some temporary, and some are volunteers, interns, or cooperative agreement personnel. On some occasions visitors may have been introduced with new employees and be included in the photographs. Some of these persons may have already completed their period of working with NAL.



photo: J. Swab

(L-R) Connie Maas, Library Technician, Cataloging Branch; Cynthia Smith, Faculty Extension Assistant/Technical Information Specialist, Animal Welfare I.C.; Michelle Foster, Clerk Typist, Information Centers Branch; Diane Inaz, Secretary, AWIC; Scott McKearney, Technical Information Specialist, Rural I.C.; Eva Wilcox, Library Aid, RIC.



photo: B. Norris

Cynthia LaHocki, Library Aid, Reference & User Services Branch.



photo: B. Norris

(L-R) Tammy Doswell, Library Technician, Horticulture I.C. & Youth Development I. C.; Romaine Osborne, Clerk Typist, Information Centers Branch (ICB); Nancy Domchick, Account Clerk, ICB; Tanya Shimmons, Intern, Rural I. C., from Clarion University of Pennsylvania.



photo: B. Norris

Kurt Kuss, Library Technician, Acquisitions & Serials Branch.



photo: J. Swab

(L-R) Yang Wu, visiting scholar from China; Ruth Boyd, Library Technician, Acquisitions & Serials Branch (A/SB); Richard Joy, Library Technician, A/SB; Joanne Bulanowski, Library Technician, Document Delivery Services Branch; Eva Kelly, Library Technician, A/SB.

New Employees



photo: B. Norris

Barbara Stommel, Graduate Student, U. Md., Pesticide Applicator Training Materials Project, Office of the Associate Director for Technical Services.



photo: B. Norris

Sherry Gibson, Library Technician, Document Delivery Services Branch.



photo: B. Norris

(L-R) Lisa Spurlock, Library Aid, Reference & User Services Branch; Jodee Kuske, Intern, Office of Associate Director for Public Services; Al Kimbrough, Library Aid, Reference Section; Jody Kaplan, Library Aid, Youth Development I.C. and Alternative Farming Systems I.C.; Patrice Johnson, Library Aid, Document Delivery Services Branch (DDSB); Kathy Marianelli, Library Aid, DDSB.



photo: B. Norris

(L-R) Tanya Tanner, Indexer, Indexing Branch (IND); Judith Torgerson, Indexer, IND; Ray Fisher, Indexer, IND; Hussein Hassan, Student, U. D. C., Technical Services Division, & IND.



photo: B. Norris

(L-R) Tracy Doles, Student Aid, Cataloging Branch (CAT); Deborah Friedman, Cataloger, CAT; Sarah Malik, Student Aid, CAT; Hamad Malik, Student Aid, Acquisitions & Serials Branch (A/SB), then Information Systems Division; Rebecca Morales, Student Aid, A/SB; Sandy Boone, Library Technician, A/SB; Rae DuBois, Head, Gift & Exchange, A/SB.

The following report was distributed to USAIN members who attended the USAIN conference held in early November at the University of Illinois. It is reproduced here, slightly updated and with the addition of the final three paragraphs, for those who have not seen it.

National Agricultural Library 1990 Highlights

Technology Developments at NAL

NAL Text Digitizing Project Continues Momentum

On February 8, 1990, authority for the National Agricultural Text Digitizing Project (NATDP) officially moved from the University of Vermont to Iowa State University, along with Project Director Nancy Eaton. NAL distributed the second pilot study CD-ROM, "Food, Agriculture and Science," to participating land-grant universities in September 1989. Produced by the Consultative Group on International Agricultural Research (CGIAR), the disk is being distributed internationally. It uses KAware2 retrieval software and includes both full text and graphics. In May 1990, NATDP distributed a third product, a two-disk set of Canadian acid rain documents. This was produced by the University of Vermont and was distributed to some international sites. It utilizes KAware2 software, and contains full text and full-page images. The final pilot disk, "Agent Orange," has been completed at NAL and was distributed in October 1990. The disc uses Windows Personal Librarian retrieval software, and contains full text, high-resolution page images, and a sample of low-resolution page images. A Retrieval Software Evaluation Team will examine several other software packages and choose one to be used for future production of CD-ROMs by NATDP. An evaluation study report for the project is expected to be completed in December 1990. The first disk in the project, which was on aquaculture, was completed in March 1989.

NAL Investigates Optical Scanning Data Entry

NAL continues to investigate optical scanning as a means of keying abstracts for the AGRICOLA database. In 1988 and 1989, NAL's Indexing Branch tested a hand-held scanner. Although slightly faster than manual data entry, the error rate (an average of 39 per abstract) was too high for practical use. NAL is presently testing another optical scanning system. Preliminary results of this system reveal that scanning is nearly three times faster than manual data entry and the error rate is lower (an average of seven errors per abstract) than that encountered with the earlier scanning system. NAL is optimistic about the prospect of replacing manual data entry of abstracts with optical scanning technology.

NAL Joins NC State in Image Transmission Project

NAL has joined with North Carolina State University in a project to evaluate using high speed telecommunications facilities of Internet to transmit bit-mapped page image files

between remote locations. The pages can be displayed on the end user's microcomputer screen or printed out. If successful, the project may significantly alter the delivery mechanism for inter-library loan transactions.

Video Disk Developed by NAL

NAL, in cooperation with other agencies of the U.S. Department of Agriculture, has developed a 12-inch optical video disk containing nearly 16,000 photographs, slides and other images on agriculture. The optical video disk is part of a system that includes a menu-driven, word-searchable database for improved access to USDA visuals. Access to the images is available by subject, names of persons in photographs, corporate name, geographic location and date. The disk system provides quick and easy access to the various collections of agricultural photographs scattered throughout USDA.

NAL Starts Computer-Aided Cataloging Instruction

With funding from Apple Computer, Inc. and the Council on Library Resources, NAL's Technical Service Division is developing computer-aided instructional materials for the training of new library catalogers. The objectives of the project, called CatTutor, are: to develop an alternative to traditional cataloging training; to design and demonstrate the feasibility of computer-assisted instruction for training catalogers; and to develop a cataloger's reference tool consisting of key cataloging publications in machine-readable form and linked by hypertext. Project participants include NAL, the Library of Congress, the University of Pittsburgh, the University of Wisconsin-Madison, and Harvard University. CatTutor will be tested at various library schools beginning in November 1990. NAL will prepare a report on the project early in 1991.

ISIS Moves Ahead Rapidly in 1990

NAL's ISIS, a minicomputer system for managing the NAL collection, is seeing a number of significant advances in 1990.

NAL on-site patrons were offered searching access to ISIS in January 1990, allowing patrons to gain on-line access to the library's card catalog. Public terminals are experiencing heavy use. Through ISIS, materials can be found using access points beyond those contained in the manual card catalog. It is now possible to search by author, title or call number; subject (using Library of Congress subject headings); and keyword.

In April, it became possible to access the OCLC database from ISIS terminals. Testing of the indexing data entry module is underway, and work with the AGRICOLA tape production module is due to begin soon. Indexing records for January 1989 thru May 1990 were loaded into ISIS in September 1990; loading from June to current is in progress. Both circulation and acquisitions mode implementation is scheduled for late 1990. NAL expects to load retrospective holdings of USDA Agricultural Research Service libraries by the end of 1990.

As of October 1990, ISIS contained approximately 405,000 cataloging records and 100,000 indexing records.

The installation on ISIS of an acquisitions subsystem configured with a local area network (LAN) was completed

in November 1989. NAL staff have been trained in its use and are testing the software. Acquisitions will shift from OCLC to ISIS by the end of the year. NAL will serve as a test site for downloading records from a bibliographic utility directly into the acquisitions LAN (the usual route is from the utility to the on-line catalog to the acquisitions system). Searching aids such as *Books in Print*, *Ulrich's* and *AGRICOLA* on CD-ROM will be accessible from any workstation on the LAN.

The ISIS serials control subsystem now is completely integrated into the task of processing serials at NAL. The system is based on *USMARC Format for Holdings and Locations*. Machine readable bibliographic records and retrospective statements of holdings were loaded from OCLC into ISIS. NAL staff coded publication patterns for most published titles. New receipts are being added to the system by the automated receiving system which updates NAL holdings. Updated holdings are immediately transmitted to NAL's on-line catalog. Automatic claiming is possible as vendors' addresses are input and titles are linked to them. NAL intends to load its gift and exchange address file of over 8,000 organizations into ISIS, enabling automated claiming for gift or exchanged serials. Temporary records are downloaded for pre-cataloged titles so that the titles and their holdings are available to users of the on-line catalog.

Virginia Tech Library Systems continues to resolve problems discovered during review of the ISIS software by NAL staff. The only area in which problems still exist are in descriptor/identifier fields. Once these problems are resolved, NAL staff will systematically test the system in its entirety.

Remote users of ISIS now include the libraries of Agricultural Research Service, Economic Research Service, Animal Plant Health Inspection Service, DC Reference Service, the National Arboretum, University of California at Davis, Cornell University Mann Library, the Egyptian Embassy, the U.S. Soil Conservation Service, Sugar Cane Plantation Research Lab in Houma, La., and the Fruit and Nut Research Lab in Byron, Georgia.

Expert System on Aquaculture Enters Second Generation

The Aquaculture Information Center of NAL has completed REGIS II, an updated version of the hypermedia/expert computer system on African aquaculture developed at the library in 1989. The original system was called REGIS, for Regional Information System for African Aquaculture.

The systems were developed to assist developing African countries in setting up aquaculture operations for profit and as a source of food. In developing the two REGIS systems, NAL has been joined by the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce and the United Nations Food and Agriculture Organization (FAO). NAL is making copies of REGIS II available, free of charge.

REGIS II updates aquaculture data from an earlier FAO report and provides information by country, species of fish, organizations, projects and personnel. REGIS II allows for faster information retrieval, Boolean and key-word searching and contains a master index. NAL has made REGIS II available for public distribution on computer diskettes start-

John Stuart Skinner of Calvert County:

Patriot and Pioneer Editor
of Agricultural and
Sports Journalism
in the United States.

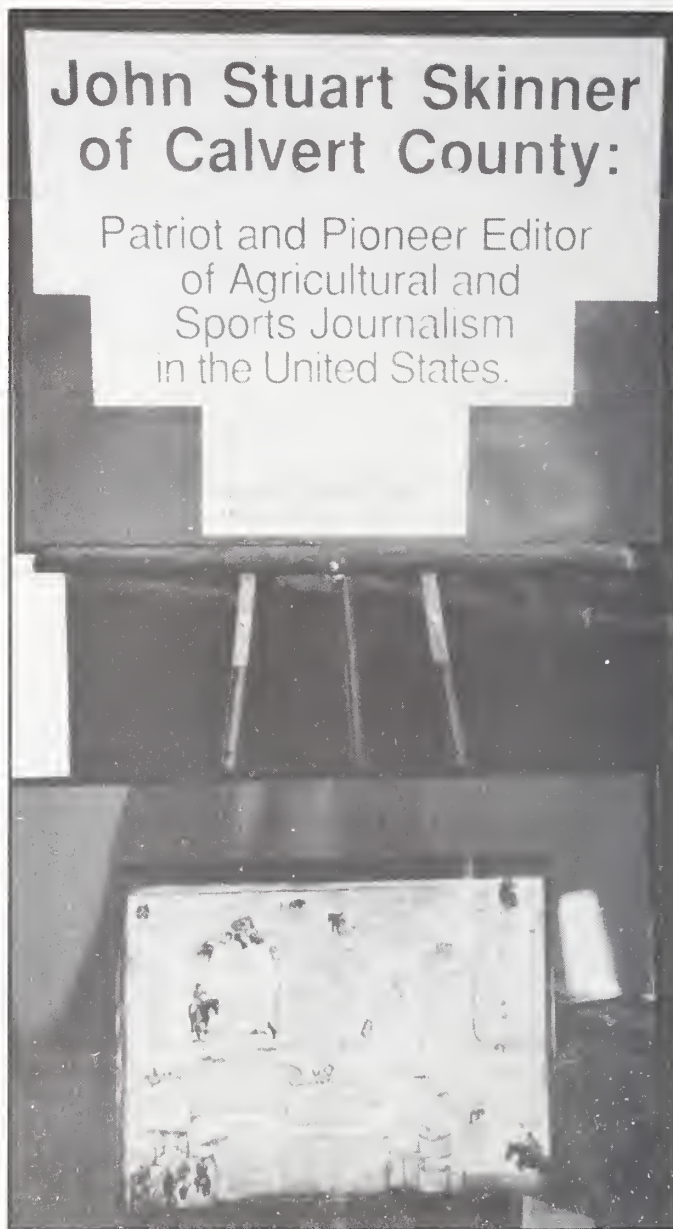


photo: J. Swab

Among the exhibits of the year 1990 at the National Agricultural Library was this one on John Stuart Skinner of colonial Maryland put together by Alan Fusonie, Head, Special Collections, NAL. The lower part of this photo shows a colonial map of Maryland.

ing in the summer of 1990.

NAL Puts Extension Service Info on CD-ROM

NAL and the USDA Extension Service (ES) completed a joint project to put a variety of ES materials on CD-ROM. The disk, called an "Extension Service Sampler," contains more than 12,000 documents (over 50,000 pages) 1,500 graphics, 50 computer programs and 14 minutes of audio. Access is provided through the RE:Search retrieval package developed by Retrieval Technology. The sampler was developed with assistance from the Virginia Cooperative Extension Service and the Minnesota Extension Service. The disk was released in March to 115 test sites for evaluation.



photo: J. Swab

Part of the John Stuart Skinner Exhibit, showing his portrait in center and some of his illustrated agricultural and sports publications. Vincent Parker, Library Technician, Acquisitions and Serials Branch, reads the broadside entitled "Catalogue of Seeds, just received per ship Armata, from Liverpool, and for sale by Robert Carmichael."

NAL Nursery and Seed Trade Catalog Collection Put on CD-ROM

NAL, in cooperation with Knowledge Access International, is preparing a multimedia CD-ROM based on a subset of NAL's Nursery and Seed Trade Catalogs Collection. Included are bibliographic records to the publications, some accompanied by images of covers or interesting artwork from the catalog itself. All 2,885 seed-trade publications that have been cataloged to date are represented, and the collection, which is the largest of its kind in the world, numbers some 150,000 items. The prototype CD-ROM became available for testing in the summer of 1990.

NAL Begins Multimedia CD-ROM Ornamental Horticulture Project

NAL, in cooperation with the University of Florida and Michigan State University, has begun a multimedia CD-ROM project on ornamental horticulture. The database is enhanced by full-color high-resolution images of plants and hypermedia links among citations, texts, and illustrations. An expert system guides both novice and enthusiast through the thicket of information. Audio portions of the disk provide a plant-name key and user orientation.

Electronic Bulletin Board Improves NAL Services

The Agricultural Library Forum (ALF), the electronic bulletin board operated by NAL, began its third year of operation in 1990. ALF provides worldwide electronic access to information about NAL products and services, 24 hours a day, 7 days a week. Three basic types of communications are supported by ALF: bulletins, messages/conferences and file transfer.

Bulletins contain information about NAL policies, programs, services, workshops, job vacancies and reference materials of general interest such as lists of special publica-

tions. The messages/conferences section of ALF can be used by callers to exchange comments and ideas electronically, and have electronic dialogues. File transfer allows callers to exchange programs, text or data files. ALF also lets users share materials that are in the public domain and are not copyrighted.

NAL Collection

NAL Collection Grows by Over Ten Percent

NAL conducted the National Shelflist Count in 1990 and results were given to compilers at the University of Illinois. The NAL collection has grown by 10.9% since 1985 when the last count was performed. A comparison of the 1990 results with 1985 reveals areas of accelerated growth in disciplines

such as the social sciences, aquaculture, and some aspects of medicine. Slower-than-average growth occurred in some subjects within the pure and applied sciences. These results will be used by NAL to target selection activities in the coming year. NAL conducted a collection evaluation on the subject of rural development. Selectors will be evaluating the use of OCLC EPIC for selection, and of OCLC/AMIGOS Collection Analysis CD for overlap study and collection analysis.

NAL Videotapes Oral Histories

NAL has begun videotaping "oral history" interviews with key contributors to the field of alternative agriculture. The subjects of the interviews relate their early background and experiences in their fields. The histories are another means by which NAL is preserving agricultural knowledge for future generations. Interviews are being conducted by NAL's Alternative Farming Systems Information Center. The interviews are available for loan. This continues the oral history program for general agriculture begun in previous years.

NAL Completes Study on Preserving Collection

A preservation study at NAL, coordinated by the Association of Research Libraries, has been completed and the final report is being prepared for publication. The findings of the report echo those of other large research libraries that have conducted preservation assessment studies. The study finds that about 25% of the NAL collection is in a state of embrittlement and another 25% needs immediate preservation attention. Plans for improving the condition of the collection by establishing a preservation program at NAL are included in the report.

NAL Publication Activities

NAL Publishes List of Journals Indexed in AGRICOLA

In 1989, NAL published a list of journals indexed in the library's AGRICOLA database. The 1990 edition became available earlier in the year. Journals are listed alphabetically by full title. Each entry also includes the abbreviated title, NAL call number, International Standard Serial Number (ISSN), place of publication, publisher, indexing coverage, and whether abstracts are included in the AGRICOLA record. New sections in the current edition include: titles added during 1989; titles no longer indexed; an abbreviated title listing; and a listing by subject. The publication gives titles indexed for AGRICOLA as of January 1990. NAL will update the *List of Journals Indexed for AGRICOLA* annually.

NAL Efforts Lead to Universal Agricultural Thesaurus

In October 1989, an interest in improving access to agricultural information brought librarians and other information specialists from around the world to Washington, D.C. for a one-day meeting. The group was chaired by Joseph Howard, Director of the National Agricultural Library. Speakers included Emile Samaha of the Food and Agriculture Organization of the United Nations and John Metcalfe of CAB International. Discussions were held on the historical development of *AGROVOC* and the *CAB Thesaurus*, perceived needs of thesaurus users, and methods of resolving conflicts among existing thesauri, including the creation of a metathesaurus. The group recommended that a feasibility study be conducted to examine the problem of access to agricultural information as provided by agricultural thesauri. The study would include: completion of a needs assessment; identification of unification options; evaluation of the gateway access concept; and review of current thesauri. For each task, the group decided the benefits would be estimated and quantified to include: the benefits for CABI/NAL/AGRIS; the benefits for others who would have to develop their own thesauri if a universal one were not available; and the benefits for users of agricultural databases.

NAL Cooperates with CAB International to Produce Thesaurus

NAL and CAB International (CABI) have cooperated to produce the third edition of the *CAB Thesaurus*. This edition includes new descriptors which improve various subject areas, history notes, and more scope notes. NAL's Indexing Branch alone proposed over 575 changes to the second edition of the thesaurus. CABI planned to issue the updated edition in late 1990. NAL has received the thesaurus on magnetic tape and began using it to index articles for the library's AGRICOLA database.

World List of Agricultural Serials Being Developed

NAL and CAB International are cooperating in compiling a database of agricultural serials published throughout the world. The database is referred to as WLAS for World List of Agricultural Serials. The *International Union List of*

Agricultural Serials, published by CABI in April 1990 is a subset of WLAS, representing all 11,565 serial titles indexed in the three major agricultural databases, AGRICOLA, AGRIS, and CAB ABSTRACTS. Two subject-specific publications have been extracted from WLAS, the World List of Poultry Serials and the World List of Aquaculture and Marine Science Serials. NAL is developing plans to produce the entire WLAS, consisting of over 50,000 titles, on CD-ROM.

Other Key NAL Activities

NAL Director Elected President of World Body of Agricultural Information Specialists

NAL Director Joseph H. Howard was elected president of the International Association of Agricultural Information Specialists, known as IAALD, at the organization's World Congress held this summer in Budapest, Hungary. Howard will service as IAALD President for a five-year term. IAALD is a 700-member body of agricultural information specialists representing 80 countries. It was established in 1955 and has as its objective the promotion and advancement of public education and information transfer in agricultural development and production.

Rural Information Health Clearinghouse Established

NAL and the U.S. Department of Health and Human Services (HHS) signed a 3-year interagency agreement in



photo: J. Swab

Another exhibit featured at NAL in 1990 was this one for Asian Pacific American Heritage Month in May.

February 1990 establishing a new rural health information clearinghouse service to be operated by the library's Rural Information Center. The Rural Information Center Health Service (RICHS) came into operation in the fall of 1990, and includes a toll-free telephone number, 1-800-633-7701, to provide easy access to current information on dealing with health care problems in small communities.

NAL Document Delivery Is Up

Document delivery volume at NAL is up about 12 percent this year compared to 1989. Increased end-user searching of CD-ROM databases is having a direct impact on the number of requests generated in libraries throughout the world. NAL and 90 percent of the Regional Document Delivery System (RDDS) libraries have installed telefacsimile machines to speed receipt and delivery of requests and materials.

To decrease the time required to provide materials to USDA agencies in Washington, DC, NAL's Document Delivery Services Branch now telefaxes requested materials to the library's D.C. Reference Center where the materials can be picked up. Use of electronic mail to receive and respond to requests for materials has increased at NAL as more public and private organizations use such systems. NAL has staff at both the Library of Congress and the National Library of Medicine in order to fill USDA employees' requests for materials not in NAL's collection. NAL is considering using its electronic bulletin board for

document delivery.

NAL Establishes Water Quality Information Center

This year, NAL has established an information center on water quality, a subject that has become a concern of the American public and a high priority of state, local and Federal governments. The center is available to assist both the public and private sectors in obtaining information on water quality and quantity. Water contamination, pollution, drought, as well as the public's perceptions of the safety of the water supply of the United States spurred the creation of the center. Dr. Janice Kemp has been named the Coordinator of the Water Quality Information Center. She comes to NAL with a master's degree in library science and a Ph.D., having done research in agricultural ecology.

NAL Co-sponsors Animal Welfare Conference

NAL's Animal Welfare Information Center, established under the provisions of the Improved Standards for Laboratory Animals Act of 1985, co-sponsored a conference on laboratory animal welfare with the Johns Hopkins Center for Alternatives to Animal Testing. Attendees represented U.S. and Canadian organizations involved in disseminating information and developing alternatives to animal use in research. NAL also produced a videotape which describes the activities of its Animal Welfare Information Center. The information center began publishing a quarterly newsletter addressing animal welfare issues and topics.

NAL Establishes Technology Transfer Information Center

In December 1989, NAL initiated the Technology Transfer Information Center to promote the rapid conversion of federally-developed inventions into commercial products by "getting the research results into the hands of those individuals and organizations who can put it into practical use." To accomplish this goal, the Library will focus on establishing and/or utilizing existing networks that link people, facilities, and processes that are involved cooperatively in moving technology from its source to other potential users. Ms. Kathleen Hayes coordinates the activities of the Technology Transfer Information Center. She holds degrees in home economics and extension education and has experience in initiating other information centers for NAL. Ms. Hayes also is the editor for the monthly newsletter of the Technology Transfer Society, *T'Squared*.

NAL and USDA's Plant Genome Research Program

For more than two years, NAL staff have been involved in planning the Plant Genome Research Program, a new, multi-million dollar initiative of the U.S. Department of Agriculture. The program will utilize fundamental molecular biology techniques to address and locate genes of economic importance in biology techniques to address and locate genes of economic importance in agronomic and forest tree species. The Agricultural Research Service is the lead agency for the program. NAL will have major responsibilities for national and international information and data aspects of the program, and will work closely with other organizations, including the National Center for Biotechnology Information at the National Library of Medicine, Gen-



photo: J. Swab

The Asian Pacific American Heritage Exhibit included works from the NAL collection and artifacts borrowed from NAL staff.

Bank, and others involved in the Human Genome Program, informatics research, and related efforts.

NAL and the National Global Change Initiative

During 1990, NAL staff increased program activities related to global change, a presidential initiative involving several Federal agencies. Staff have served on the USDA research team that is guiding departmental efforts and on a government-wide working group wrestling with data handling issues. NAL has developed plans for meeting information and data needs of USDA (and other agencies, organizations and individuals) related to global change, and in the near future will issue a special information packet on global change issues from the agricultural perspective.

Women's Equality Day

by Vallie F. Bray, Beltsville Area-Special Emphasis Programs Co-Manager, Agricultural Research Service

On Wednesday, August 22, 1990, numerous employees from the USDA/Agricultural Research Service-Beltsville Area (ARS-BA) were joined by a number of the ARS Headquarters employees located at Beltsville, employees from the National Agricultural Library (NAL), USDA Departmental Managers, and visitors to commemorate Women's Equality Day. This special observance is in recognition of the 19th Amendment to the U.S. Constitution giving women the right to vote in Federal elections. The 19th Amendment was ratified by the U.S. Congress on August 26, 1920. Since then, August 26th has become known as Women's Equality Day. The August 22nd activity marked the 5th anniversary of the Beltsville Area's Federal Women's Program (FWP) and the Equal Employment Opportunity (EEO) Awards Recognition.

The Area presented 2 FWP Awards, 2 EEO Awards, plus exemplary acknowledgements to several employees who contributed a high level of support to both the FWP and the EEO effort this year. The Award recipients in the FWP categories were:

1) Ms. Sherry Cohen, Secretarial/Clerical Employee of the Year for superior excellence in performance of her duties.

2) Ms. Nancy Thrush (Office of Finance and Management-OFM), Special Recognition for outstanding support and work in the Beltsville Area and community.

3) Mr. William Heartley, Mr.

Alton Fleming, Mr. Mike Blum, Ms. Patsy Jackson, and Ms. Julie Le Phew for their exemplary contributions to the USDA Women's Action Task force (WAT) Scholarship Fund raising project.

The EEO Impact Award went to Dr. Jacobus Kaper for extraordinary efforts in advancing Equal Opportunity through his hiring and promotion of minorities, and his ability to encourage and inspire all those with whom he has worked to reach their full career potential.

Dr. Martin Kulik was recipient of the EEO Supervisors/Managers Award resulting from his conscientious promotion of EEO goals through the hiring and promotion of minorities, and the genuine interest and counsel given as Research Leader of the Gerplasm Quality and Enhancement Laboratory.

Mr. Kenneth Wilzer received special acknowledgement for development of a computer program to assist with data collection and analyses necessary for EEO management.

The Awards presentation was conducted by Dr. Essex E. Finney, Jr., Beltsville Area Director, and Ms. Margaret Johnson-Greene, EEO Manager.

The theme for the Area's 1990 Women's Equality Day Program was cultural diversity, which was emphasized through the refreshing, enlightening, and educational presentation of guest speaker, Dr. Joanne Yamauchi, (see biography in box on page 35), Professor of Communication in the School of Communication at American University.

Dr. Yamauchi stressed "the importance of recognizing and appreciating the diversity of gender, ethnic, age, and physical abilities which can be managed in such ways as to create a new organizational culture, a special hallmark of American workforce development. Both managers and



photo courtesy of V. Bray
Jane Gates (Left), Federal Women's Program Manager, and member of the Alternative Farming Systems Information Center, NAL, greets Dr. Joanne S. Yamauchi, Professor of Communication, American University, and guest speaker at the Women's Equality Day luncheon.

employees need to develop situational communication management strategies that incorporate the awareness of cultural differences in workplace relations in order to enhance overall productivity levels in the organization."

Ms. Valerie Taylor-Hobson, a young and gifted Black gospel recording artist, provided an electrifying spiritual inspiration to the program. Her performance elevated the audience to a new dimension through her vocal talent, sign language interpreting skill, and charisma.

Ms. Diane Adger-Johnson gave attendees an overview on the Office of Personnel Management's career enhancement Women's Executive Leadership (WEL) Program. She shared some of her experiences and benefits derived as a WEL program participant with the audience. Ms. Johnson was both the ARS Agency and Arca's first employee to participate in the WEL Program.

Dr. Mary Carter, ARS Associate Administrator, Ms. Barbara Gary, Departmental FWP Manager, Ms. Laura Whitaker, Departmental FWPM Council President, Mr. James Stevens, OFM Safety and Health Management Division Chief, Ms. Jane Gates, National Agricultural Library-Federal Women's Program Manager, and Ms. Tanya Tanner, National Agricultural Library-Special Emphasis Programs Manager were among a few of the special attendees who celebrated Women's Equality Day with the Beltsville Area. This commemoration event was held at the Golden Bull Restaurant, in Adelphi, Maryland.

A heartfelt *thank you* to all, including the N.A.R.C. Federal Credit Union, who supported the USDA/ARS-Beltsville Area 1990 Women's Equality Day Recognition Program. A tremendously enjoyable, educational experience was had by the attendees.



photo: J. Swab

Alton Fleming, Plant Physiologist, and SEP Committee member, ARS, here serves as chef at the Flea Market/Bake Sale/Cook Out co-sponsored by ARS/NAL SEP committees to raise funds for the WAT annual scholarship award.

Dr. Joanne S. Yamauchi

Dr. Joanne S. Yamauchi is a Professor in the School of Communication at The American University in Washington, DC. She received her B.A. in English and Theatre from Goucher College, her M.A. in Speech Communication with honors from Columbia University, and her Ph. D. in Communication Studies from Northwestern University.

Her publications and training efforts have focused on managing culturally diverse communication in organizations, and values and communication patterns of Asian American professionals. She has also conducted numerous seminars nationally and internationally for over 30,000 professionals on these same subjects. Her seminars have been conducted for all of the major U.S. government departments, all of the major national Asian American organizations, and numerous private corporations, non-profit organizations, and universities.

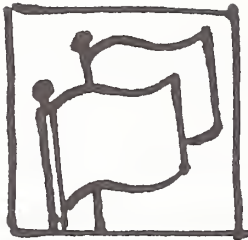
Dr. Yamauchi has received grant awards from the National Institute of Mental Health, the National Institute of Education, and The American University. Her Achievements have been listed in the *World Who's Who of Women*, and she was recently named "Asian American Professional Woman of the Year." She also has the distinction of being the first Asian Pacific American woman and the youngest faculty member in the history of American University to receive tenure and to be promoted to the rank of full professor.

Dr. Yamauchi has also served as an associate editor of several communication journals, governing board member of the Society for Intercultural Education, Training and Research, and commissioner of the Intercultural and International Communication Commission of the National Speech Communication Association.



photo: J. Swab

Vallie Bray, a Biological Laboratory Technician—Microbiology, Special Emphasis Program (SEP) Co-Manager, ARS, author of the report on "Women's Equality Day," here organizes a Flea Market co-sponsored by ARS & NAL SEP committees to help raise funds for the USDA Women's Action Taskforce annual scholarship award.



Visitors



photo: J. Swab

FNIC Staff meet with the new HNIS administrator. (L-R) Beverley Headley-Ayoutunde, Graduate Student, Howard University; Shirley King Evans, Technical Information Specialist, NAL; Natalie Updegrove, Faculty Research Assistant, University of Maryland/NAL Contract; Sue Ann Ritchko, HNIS Administrator; Robyn Frank, Head, Information Centers Branch, NAL; and Jana Landkammer, Graduate Student, University of Maryland. Sandy Facinoli, new Coordinator of FNIC, was appointed sometime after this meeting.



photo: J. Swab

Sue Ann Ritchko, new Administrator of the Human Nutrition Information Service, visited NAL's Food and Nutrition Information Center to meet FNIC staff, learn of its services, discuss ways the two agencies, NAL & HNIS, can work together most effectively, and future program thrusts.



photos: J. Swab

(Above) Natalie Updegrove (on the right) provides orientation to a group of Home Economics Teachers from Fairfax County, Virginia, at NAL's Food and Nutrition Information Center.

(Right) Natalie Updegrove of NAL's Food and Nutrition Information Center staff (on right) leads a tour of NAL for a group of librarians and information specialists from many countries who are visiting numerous libraries around the United States. The tour focused on services of NAL and its information centers, on the Library's use of new technologies, and on how NAL serves its constituency from a management point of view.

Included in the photo below, but not individually identified were: Paik San Lau, Malaysia; Chang Danzi, China; Yang Renjuan, China; Niyibizi, Rwanda; Ahmed Y. Al-Yadomi, Yemen; Cornelia Williams, Dominica; Laila Hemeda, Egypt; Sokoveti Tutmoala, Fiji; Hellevi Yrjola, Finland; Evgenia Kefallineou, Greece; and Alix Paul, USIA escort. Others in the group of librarians in the Multi-Regional Project, and guests of the U.S. Information Agency were: Asminingsih Soetandyo, Indonesia; Ivarature Kivia, Papua New Guinea; Camil Dadarlat, Romania; Reigneth Gugu Nyongwana, South Africa; Jean-Batiste Muhakwa, Burundi; Francoise Thybulle, Haiti; and Pawan Kamar Gupta, India.





photos: B. Norris
(Below) NAL Director, Joseph H. Howard (right), welcomes Salv J. Stellini, Ambassador of Malta (Center), and Frank Piason, U.S. Agricultural Counselor, Rome (on left).

(Left) Ambassador Stellini and Counselor Piason receive a demonstration of NAL's CD-ROM products, REGIS II, the Regional Information System for African Aquaculture, and other new technology applications by Carole Shore, Information Systems Division, NAL.



photo: J. Swab
(Below) Pat Anderson, U.S. Bureau of the Census (left), accompanies U Win Thien, Director (Center), and U Win Myint, Deputy Director, Settlements & Land Records Department, Ministry of Agriculture and Forests, Union of Myanmar (formerly called Burma), on a tour of NAL, which included a discussion of NAL's publications and their printing and distribution.



photo: J. Swab
(Below) Dr. Shawqi Talia, U.S. State Department (left), leads a visit to NAL by computer specialists from the Information Decisions Support Center for the Cabinet of the Egyptian government: (L-R) Dr. Ahmed Nazif, Mr. Ashraf Rashad, and Gen. Radwan Said. The visit included a meeting with staff from NAL's Information Systems Division, and demonstrations of NAL's new technology applications.





photos: J. Swab
(Left) NAL Director, Joseph H. Howard, meets with Syed Salim Agha, Director, Library Universiti Pertanian Malaysia, about NAL programs and services and how they relate to libraries in Malaysia. Senior NAL staff joined the meeting which was followed by technology demonstrations.

(Below) A delegation from Nabisco Brands, Inc., met with the NAL Director, Senior Staff, and Food & Nutrition staff to share information on library and information technology, meet NAL staff, and get an overview on the Library and its services. (L-R) Dr. Charles Sodano, Ms. Sonia Meurer, Mr. Frank Cannistra, & Ms. Karen Topolewski.



photo: B. Norris
(Above) NAL Director, Joseph H. Howard, meets with Ms. Ine Tsai Meu Chong, Director of Libraries, University of Suriname, who was visiting major libraries in the U.S. to see all aspects of library systems using computers under the sponsorship of the U.S. Information Agency.

photo: J. Swab
(Right) Six Soviet farmers and their interpreters visited NAL as part of the Communicating for Agriculture Exchange Program (CAEP). The farmers will be spending six months in training on Iowa farms. Here Susan Fugate (right) gives an overview of NAL and its services. Caroline Early, Head, Acquisitions & Serials Branch, discussed U.S./U.S.S.R. publications exchange programs, followed by new technology demonstrations. Members of the group not individually identified here, include George Aslanishvili (beef), Alexander Golovin (field crops), Muradyan Ovik (field crops), Andrei Silnov (dairy), Nikolai Popov (dairy), and Nuradin Dandamayev (beef).



photo: J. Swab
 (Right) Masakatsu Katogi (2nd from left), Librarian, National Diet Library, Tokyo, and Shozo Nakano (left) met with (L-R) NAL Director, Joseph H. Howard, Carol Ditzler, Head, Document Delivery Services Branch (representing Public Services), Caroline Early, Head, Acquisitions and Serials Branch (representing Technical Services), and William Feidt, Head, Library Automation Branch (representing Information Systems) regarding cooperation between the two national libraries.



photos: B. Norris
 (Left) Jean Larson (right), Coordinator of the Animal Welfare Information Center (AWIC), speaks about AWIC services and the resources of NAL to a group of 48 animal scientists (left and below) from the Ontario Ministry of Agriculture—Animal Industry Branch, and the Guelph Agriculture Centre, University of Guelph, Guelph, Ontario, Canada. The agriculture or veterinary medicine graduates are all responsible for research, policy development, and extension in the animal industry, and were making a tour of agricultural and animal research and information facilities and farms with innovative applications of technology in New York, Pennsylvania, and Maryland. Brian Norris, Public Affairs Officer, NAL, gave an orientation and tour of the Library.



photo: J. Swab
 (Left) A group of Danish librarians from the Danish Technical Information Service visited NAL on a tour of major academic and research libraries including the three national libraries, National Agricultural Library, National Library of Medicine, and Library of Congress. NAL Director, Joseph Howard (right) and Assistant Director for Policy and Planning, Maria Pisa (center foreground) discussed NAL's national and international roles, issues of common concern, and organizations and institutions with which NAL is cooperating to achieve national and international goals. The librarians were all interested in user services and information technology, and met with NAL staff and received demonstrations of NAL's technology applications.



photos: J. Swab
Shirley Traxler (above), Head of USDA's "Ag in the Classroom" Program, brought a group of teachers (above right and right) to NAL to learn of the Library's resources, services, and technology applications. Here Brian Norris, NAL's Public Affairs Officer, provides an introduction to the day's program of activities and demonstrations.



photo: J. Swab
(L-R) Louis L. Goldstein, Comptroller of the Treasury of Maryland, Alan Fusonie, Head, NAL Special Collections, and Joseph H. Howard, NAL Director, examine a manuscript and rare books relating to the flora and agriculture of Maryland in colonial times. Mr. Goldstein, a resident of Calvert County with great interest in County and State history, came to NAL to see these materials and NAL's use of optical discs to preserve and disseminate them.

photo: J. Swab
Another particular interest of Mr. Goldstein's was NAL's exhibit on John Stuart Skinner, Maryland colonial patriot and pioneer editor of agricultural and sports journalism in America, whose portrait can be seen here between Dr. Fusonie and Mr. Goldstein. (For a view of other materials in this exhibit, see the photographs on pages 30 and 31 of this issue of *ALIN*.)

NAL Holds Media Day



photos: B. Norris

(Above) Alan Fusonie, Head, Special Collections, NAL, discusses the development of laser discs containing NAL's collection of Forest Service photographs and collections of photographs from USDA's Office of Public Affairs and various agencies and the databases related to the two discs.

Ron Young, Audio/Visual Information Specialist with NAL Special Collections, discusses the production of the discs (below, left) and demonstrates the use of the discs and databases together (right, foreground).



(Below) At the luncheon provided by the Associates of the National Agricultural Library, Inc., Patricia Endel, its Executive Director (center), and Robyn Frank, Head, Information Centers Branch, NAL, talk with media participants.

Journalists from the U.S. Information Agency (USIA) and other news media were given a tour of the National Agricultural Library and demonstrations of new NAL technology during a special news media day in July 1990. Ten journalists, mostly radio reporters with USIA's Voice of America (VOA), participated. A USIA sound technician recorded all NAL speakers and those giving demonstrations during the day for use in VOA overseas broadcasts.

Participants were treated to a catered lunch by the Associates of the National Agricultural Library, a non-profit private NAL support group.

This was the first NAL media day. The Library expects to make this a routine event. — Brian Norris





New Bibliographies

The bibliographies in the *Quick Bibliography* series are primarily computerized online as batch bibliographies emanating from searches performed by the NAL Public Services Division Staff in response to customer requests. Searches are selected for inclusion based on the currency of the topic, interest among clientele, and probable value to a larger audience. Since October 1988, all *QB's* include search strategies. Unless otherwise specified, citations are from AGRICOLA.

The other bibliographic series, including *Special Reference Briefs*, have been researched and produced to meet special needs of clientele of the Library and its Information Centers. Revisions or updates will be announced when produced. Only one copy of a requested title will be sent; however, requesters may make copies. To request a copy of a *Quick Bibliography*, *Special Reference Brief*, or other bibliographic work, circle the desired title(s) below and send your request with a self-addressed label to:

Reference Branch, Room 111
National Agricultural Library
10301 Baltimore Boulevard
Beltsville, MD 20705

Quick Bibliographies

Q.B.—91-01. Stress in Poultry, January 1979-August 1990. 311 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-02. Poultry Housing and Facilities, January 1979-August 1990. 417 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-03. Welfare of Poultry, January 1979-August 1990. 244 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-04. Welfare of Horses, January 1979-August 1990. 182 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-05. Equine Housing and Facilities, January 1979-August 1990. 65 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-06. Stress in Horses, January 1979-August

1990. 47 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-07. Training Materials for Animal Facility Personnel, January 1979-August 1990. 203 citations; languages: none excluded. Prepared by Karen J. Clingerman. Animal Welfare Information Center. October 1990.

Q.B.—91-08. Careers in Agriculture, January 1980-July 1990. 227 citations; languages: English only. Prepared by Susan Chapman. Reference and User Services Branch. October 1990. Updates 79-14.

Q.B.—91-09. G.A.T.T. and Global Agriculture, January 1989-August 1990. 225 citations; languages: none excluded. Prepared by Mary E. Lassanyi. Agricultural Trade and Marketing Information Center. October 1990.

Q.B.—91-10. U.S. Farm Policy, January 1989-August 1990. 279 citations; languages: none excluded. Prepared by Mary E. Lassanyi. Agricultural Trade and Marketing Information Center. October 1990. Updates 88-59.

Q.B.—91-11. Japan's Agricultural Marketing and Trade, January 1988-August 1990. 150 citations; languages: none excluded. Prepared by Mary E. Lassanyi. Agricultural Trade and Marketing Information Center. October 1990.

Q.B.—91-12. Herb Gardening, January 1985-July 1990. 120 citations; languages: English only. Prepared by Jane Potter Gates. Horticulture Information Center. October 1990. Updates 89-76.

Q.B.—91-13. Calf Housing and Facilities, January 1979-August 1990. 205 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-14. Welfare, Care and Husbandry of Swine, January 1979-August 1990. 227 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-15. Swine Housing and Facilities, January 1985-August 1990. 298 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-16. Stress in Swine, January 1979-August 1990. 398 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990. Updates 89-09.

Q.B.—91-17. Welfare, Care and Husbandry of Cattle, January 1979-August 1990. 250 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-18. Stress in Cattle, January 1979-August 1990. 386 citations; languages: none excluded. Prepared by Janice

C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-19. Dairy Cattle Housing and Facilities, January 1979-August 1990. 321 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-20. Beef Cattle Housing and Facilities, January 1979-August 1990. 127 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-21. Stress in Sheep and Goats, January 1979-August 1990. 139 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-22. Sheep and Goat Housing and Facilities, January 1979-August 1990. 226 citations; languages: none excluded. Prepared by Janice C. Swanson. Animal Welfare Information Center. November 1990.

Q.B.—91-23. Drip and Trickle Irrigation for Water Conservation, January 1987-August 1990. 410 citations; languages: English only. Prepared by Jayne T. MacLean. Alternative Farming Systems Information Center. November 1990. Updates 89-35.

Q.B.—91-24. Soil Organic Matter: Impacts on Crop Production, January 1986-June 1990. 201 citations; languages: none excluded. Prepared by Karl R. Schneider. Reference and User Services Branch. November 1990. Updates 88-76.

Q.B.—91-25. Seed Collecting and Processing, January 1983-August 1990. 234 citations; languages: English only. Prep. by Henry Gilbert. Reference and User Services Branch. November 1990. Updates 89-13.

Q.B.—91-26. Aquaculture in Ponds, January 1986-August 1990. 62 citations; languages: none excluded. Prepared by Deborah T. Hanfman. Aquaculture Information Center. November 1990. Updates 89-78.

Q.B.—91-27. Composts and Composting of Organic Wastes, January 1985-July 1990. 263 citations; languages: English only. Prepared by Jayne T. MacLean. Alternative Farming Systems Information Center. November 1990. Updates 89-59.

Q.B.—91-28. Killer Bees/Africanized Bees, January 1981-September 1990. 297 citations; languages: English, Spanish and Portuguese only. Prepared by Sheldon Cheney. Reference and User Services Branch. November 1990. Updates 87-32.

Q.B.—91-29. Adult/Patient Nutrition Education Materials, January 1982-September 1990. 223 citations; languages: none excluded. Prepared by Natalie A. Updegrave. Food and Nutrition Information Center. November 1990.

Updates 90-18.

Q.B.—91-30. Water Quality in Aquaculture, January 1984-July 1990. 87 citations; languages: none excluded. Prepared by Deborah T. Hanfman. Aquaculture Information Center. November 1990. Updates 89-56.

Q.B.—91-31. Protecting Plants from Animal Pests, January 1984-August 1990. 242 citations; languages: English only. Prepared by Carol Kopolow. Reference and User Services Branch. November 1990.

Q.B.—91-32. Seed Germination, January 1983-August 1990. 236 citations; languages: English only. Prepared by Carol Kopolow. Reference and User Services Branch. November 1990.

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NT-91-C2. Nutrition, Learning and Behavior/Consumer. Prepared by Seema A. Bhagwat, Graduate School, University of Maryland. Food and Nutrition Information Center. [December] 1990. 2 p.

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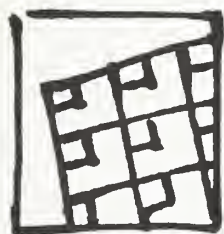
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Agriculture Datebook

December 28-30: American Agricultural Economics Association Meeting. Washington, DC. Contact: (202) 447-4164.

1991 EVENTS

January 9: American Honey Producers Association. Baton Rouge, LA. Contact: (202) 447-7907.

January 12-17: Society for Range Management Annual Meeting. Arlington, VA; Crystal Gateway Marriott. Contact: SRM, 1839 York Street, Denver, CO 80206.

January 14: Peanut Butter and Nut Processors Convention. Clearwater, FL. Contact: (202) 447-4164.

January 14: The Chicago Farmers "New Policy Environment and Implications for Farm Owners." Chicago, IL. Contact: (202) 447-4164.

January 20-22: Farm Credit Council 8th Annual Meeting. Nashville, TN; Opryland Hotel. Contact: FCC, (202) 626-8710.

January 20-24: National Council of Farmer Cooperatives 62nd Annual Meeting. Nashville, TN; Opryland Hotel. Contact: NCFC, (202) 626-8700.

January 23: American Beekeeping Association Convention. Mobile, AL. Contact: (202) 447-4256.

February: Seventeenth Annual Technical Seminar of ABC Research. Gainesville, FL. Contact: (904) 372-0436.

February: Turkey Industry Conference. Harrogate,

England. Contact: 44-635-253239.

February 7-10: Southeastern Grain & Feed Association and Georgia Feed & Grain Association Annual Convention. Charleston, SC; Mills House Hotel. Contact: SEGF, Suite G-12, 1300 Paddock Dr., Raleigh, NC 27609.

February 10-13: U.S. Feed Grains Council Annual Board of Directors Meeting. San Antonio, TX; Hyatt Regency. Contact: USFGC, (202) 789-0789.

February 16-23: National Future Farmers of America (FFA) Week. Contact: National FFA Center, (703) 360-3600.

February 20-21: Conference on Economic Accounting for Commodity Costs & Returns. Kansas City, MO. Contact: (202) 447-4164.

February 20-21: Midwest Poultry Federation Convention. Minneapolis, MN; Minneapolis Convention Center. Contact: John Hausladen, 678 Transfer Rd., St. Paul, MN 55114.

February 21-24: Mid-Atlantic Direct Marketing Conference and Trade Show and the 6th Annual National Direct Marketing Conference. Parsippany, NJ; Parsippany Hilton. Contact: Morris Fabian, Rutgers Cooperative Extension, P.O. Box 231, New Brunswick, NJ 08903.

February 26: American Farm Bureau Federation. Parkridge, IL. Contact: (312) 399-5749.

February 26: CAST Annual Meeting. Washington, DC. Contact: (202) 447-5923.

February 26: National Feed Ingredients Association Business Management Seminar. Kansas City, MO; Hyatt Regency Crown Center. Contact: NFIA, (515) 225-9611.

February 27-28: National Feed Ingredients Association Mid-Year Meeting. Kansas City, MO; Hyatt Regency Crown Center. Contact: NFIA, (515) 225-9611.

March 1-3: Catfish Farmers of American Annual Meeting. Little Rock, AR; Excelsior Hotel. Contact: Bill Glasscock, P.O. Box 24866, Little Rock, AR 72221.

March 1-3: National Association of Meat Purveyors 34th Management Conference. Arlington, VA; Hyatt Regency Crystal City. Contact: NAMP, (703) 827-5754.

March 3-6: Grain Elevator & Processing Society Exchange Annual International Technical Conference. Indianapolis, IN; Indianapolis Convention Center. Contact: GEAPS, P.O. Box 15026, Commerce Sta., Minneapolis, MN 55415.

March 8-12: 84th National Food Processors Association Annual Convention and International Exposition. Chicago, IL. Contact: NFPA, (202) 639-5900.

March 10-13: International Exposition for Food Processors. Chicago, IL; McCormick Place. Contact: (202) 639-5900.

March 21-23: Markets '91 Agricultural Commodity (AC) Outlook Convention. Vancouver, B.C., Canada; Bayshore Inn. Contact: Henry VanKessel, AC, Suite 1100, 1185 W. Georgia, Vancouver, B.C., Canada V6E 4E6.

March 28: American Society of Farm Managers and Rural Appraisers. Sacramento, CA. Contact: (202) 447-5923.

April 3-4: New England Poultry Association Health Conference. Portsmouth, NH; Sheraton Portsmouth Hotel. Contact: William Bell, NEPA, P.O. Box 725, Augusta, ME 04330.

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(Above) Men harvesting potatoes and loading them into barrels at Aroostook, Maine, in September 1908. USDA Photo No. CEN-29 by C. H. Hanson.

(Below) Roll out the barrel is only a sometime thing during potato harvest in Maine. Most of the time, these youngsters are filling the barrels with potatoes just dug out of the ground. USDA Photo No. 041-46-20A, 1975, by George Robinson.

The photos are a source of historic as well as contemporary information, while the disc helps to preserve the originals.